The relationship between non-cognitive skills and the academic achievement of African American males in community colleges

by

Karow Gordon

B.A., Kalamazoo College, 1995
M.B.A., Western Michigan University, 2001

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF EDUCATION

Department of Educational Leadership
College of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2021

Abstract

The purpose of this quantitative correlational study was to examine the relationship between non-cognitive skills and academic achievement in the form of course completion rate and cumulative GPA of African American male community college students. Eight non-cognitive variables were measured compared to the course completion rate and cumulative GPA of the study subjects. Study participants were 102 African American males attending Midwest community colleges in urban settings with 10,000 or more student enrollment. Sedlacek's (2004) Non-cognitive Assessment method identified eight non-cognitive variables (NCV) and served as the conceptual framework for the investigation. Participants completed the Non-cognitive Questionnaire (NCQ), an instrument created by Sedlacek (2004) to measure the eight non-cognitive variables. Questionnaire data were matched to individual student course completion rates and cumulative GPA records. Pearson product-moment correlational analyses were performed on the data to determine which of the eight non-cognitive variables were related to the participants' course completion rate and cumulative GPA. The results showed that course pass rate was significantly correlated with non-cognitive variable #6 (successful leadership experience, $r = .230$, $p < .05$), and with non-cognitive variable #4 (preference for long term goals, $r = .203$, $p < .05$). None of the non-cognitive variables contributed to the prediction of cumulative GPA.

Additionally, a stepwise linear regression analysis was calculated to determine non-cognitive variables most predictive of course completion rate and cumulative GPA. No additional results were found when the non-cognitive variables were entered into a linear, stepwise multiple regression equation. Variable #6 (successful leadership experience) was the only non-cognitive variable contributing to the prediction of Pass Rates.

Keywords: cognitive skills, non-cognitive variables, non-cognitive questionnaire, academic performance predictors, community college, African American males

The relationship between non-cognitive skills and the academic achievement of African American males in community colleges

by

Karow Gordon

B.A., Kalamazoo College, 1995
M.B.A., Western Michigan University, 2001

A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF EDUCATION

Department of Educational Leadership
College of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2021

Approved by:

Major Professor
Christine Johnson McPhail Ph.D.

Copyright

Abstract

The purpose of this quantitative correlational study was to examine the relationship between non-cognitive skills and academic achievement in the form of course completion rate and cumulative GPA of African American male community college students. Eight non-cognitive variables were measured compared to the course completion rate and cumulative GPA of the study subjects. Study participants were 102 African American males attending Midwest community colleges in urban settings with 10,000 or more student enrollment. Sedlacek's (2004) Non-cognitive Assessment method identified eight non-cognitive variables (NCV) and served as the conceptual framework for the investigation. Participants completed the Non-cognitive Questionnaire (NCQ), an instrument created by Sedlacek (2004) to measure the eight non-cognitive variables. Questionnaire data were matched to individual student course completion rates and cumulative GPA records. Pearson product-moment correlational analyses were performed on the data to determine which of the eight non-cognitive variables were related to the participants' course completion rate and cumulative GPA. The results showed that course pass rate was significantly correlated with non-cognitive variable #6 (successful leadership experience, $r = .230$, $p < .05$), and with non-cognitive variable #4 (preference for long term goals, $r = .203$, $p < .05$). None of the non-cognitive variables contributed to the prediction of cumulative GPA.

Additionally, a stepwise linear regression analysis was calculated to determine non-cognitive variables most predictive of course completion rate and cumulative GPA. No additional results were found when the non-cognitive variables were entered into a linear, stepwise multiple regression equation. Variable #6 (successful leadership experience) was the only non-cognitive variable contributing to the prediction of Pass Rates.

Keywords: cognitive skills, non-cognitive variables, non-cognitive questionnaire, academic performance predictors, community college, African American males

Table of Contents

List of Tables

Acknowledgements

Many remarkable people contributed to the completion of my dissertation journey. I am grateful for my incredible committee, colleagues, family, and friends. This accomplishment would not be possible without their support and encouragement.

I want to thank my chair, Dr. Christine Johnson McPhail, for her leadership and guidance during this study. Thank you to my committee members, Dr. Terry O'Banion, Dr. Donna Jovanovich Monse, Dr. Jerry Johnson, and Dr. Craig McGill, for their valuable contributions and insight.

I appreciate Dr. Curtis L. Ivery for his support, for providing this opportunity for the WCCCD Cohort, and for encouraging us to pursue a doctorate. Dr. David Beaumont and Dr. Harvey Dorrah have and continue to serve as role models for leadership. Thank you, Dr. Jacqueline Fleming, for helping me analyze the data and make sense of the numbers.

Special thanks to my WCCCD Cohort for their love and encouragement throughout this journey, especially Dr. Carolyn Carter, who provided leadership and support above and beyond expectations. My friend and colleague Dr. Abby Freeman helped me get through some difficult times. Last but certainly not least, my colleague and cohort carpool buddy Nahla Baaqi, Dr. Uduma is smiling down on us.

Dedication

This dissertation is dedicated to my mother and the memory of three essential people lost during my dissertation journey. They were all significant in their own way.

Bertha Jean Halsey gave birth to me and instilled in me the importance of education. She personifies unconditional love. Her early involvement in my education was a springboard for all of my accomplishments.

Dr. Irving Pressly McPhail was a mentor and my original dissertation chair. His in-depth knowledge of quantitative research matched his incredible personality in the classroom. His support gave me a solid foundation for completing the first three chapters of my dissertation.

Dr. Letitia Nkechi Uduma was a long-time mentor and friend who exemplified strategic thinking and was an expert on "getting things done." She recommended me for the doctorate program and supported me until the end. Her kindness and intelligence have left a permanent mark.

Dr. Jacqueline Hodges was a mentor and friend who helped shape the professional educator I have become. She planted the seed to pursue a career in educational leadership and counseled me on entering the doctorate program. Her intelligence, grace, and extraordinary communication skills will not be forgotten.

Chapter 1 - Introduction

Many factors determine student success in higher education. Acquiring an education requires "having a certain command of a curriculum, and knowledge of theories and facts from various disciplines" (Garcia, 2014, p.3). Certain traits and skills aid academic performance, including interpersonal skills, tenacity, self-discipline, and ingenuity (Garcia, 2014). The generic term for these traits is non-cognitive skills (Heckman & Kautz, 2013).

The multidimensional nature of education contains both cognitive and non-cognitive attributes (Phillips & Siegel, 2013). The importance of cognitive processes in institutions of education is universally accepted. Schools help children develop cognitive skills throughout their education experience by training them to think, read, pay attention, and remember. However, the development of non-cognitive skills and their role in supporting the critical cognitive factors necessary for student development receives less attention.

Over the years, African Americans have gained considerable ground in access to quality educational institutions in America; however, African Americans fail to complete and achieve academically in higher education at the same level as their Caucasian peers. The National Student Clearinghouse (2017, p. 2) reported that "Black students had the lowest persistence rate (66.9%) of all students; just half of the Black students returned to the starting institution (54.5%)." Higher education statistics confirm that African Americans fall below national averages in persistence and completion (National Student Clearinghouse, 2017). African American males are markedly prone to course failure and dropping out of college compared to Caucasian peers.

The academic achievement of African American students in community colleges reflects the data reported by the National Student Clearing House. For example, while 27% of White

males who enter the community college will have earned a certificate, degree, or transferred to a four-year college or university within three years, only 17% of Black men will have attained their academic goals within the same time frame (Wood et al., 2014).

Numerous educators and political leaders believe that public education should foster non-cognitive skills in addition to the cognitive abilities it promotes (Garcia, 2013). In addition, many teachers and parents understand the significance of particular behaviors and how they contribute to developing cognitive skills (Bridgeland et al., 2013). These findings were supported by the result of a nationally representative survey of prekindergarten through twelfth-grade teachers to evaluate the role of social and emotional learning in America's schools (Bridgeland et al., 2013).

Education systems devote a significant amount of attention to cognitive skill development, but non-cognitive skills significantly affect academic achievement (Gardner, 2004; Heckman & Kautz, 2014). While it is relatively easier to define and measure cognitive skills, educators find it more difficult to agree on what non-cognitive skills are and how to evaluate them (Duckworth et al., 2011; Heckman & Kautz, 2014). A meta-analysis of longitudinal data on more than 10,000 cadets at the U.S. Military Academy at West Point revealed that non-cognitive attributes rather than cognitive factors were more predictive of successfully completing training and graduating in four years (Duckworth et al., 2019). Measures of cognition fail to assess non-cognitive skills such as conscientiousness, perseverance, and sociability, which enhance student performance in the classroom (Heckman et al., 2014).

Numerous studies have shown that non-cognitive variables may predict academic, economic, social, psychological, and physical well-being. (Almlund et al., 2011; Farrington et al., 2012). Poropat (2009) found conscientiousness to be the most robust predictor of course grades after conducting a meta-analysis of Big Five personality traits and course grades in

primary, secondary, and post-secondary education. Duckworth and Seligman (2006) found that self-control predicted the final grades of American middle school students when controlling for general intelligence.

Cognitive and non-cognitive factors contribute to success in college; however, less research has been devoted to the latter. Data indicates that African American males under-perform academically in higher education compared to other racial groups (National Student Clearinghouse, 2017). Based on the issues identified in previous research, it is necessary to conduct further investigation on the relationship between non-cognitive attributes and the academic performance of African American males in community colleges.

Problem Statement

African American students persist and complete their studies at higher education institutions at lower rates than Caucasian students. For example, at 2-year institutions, 23% of first-time, full-time Black students completed a 2-year degree within three years, while the average for all other racial groups was 30% for the same time period (Snyder et al., 2019). In addition, at 2-year institutions, 11.5% of Black students dropped out during year one, 48.9% left after three years, and 83% left after six years without attaining their intended credentials (U.S. Department of Education, 2009).

When considering the traditional predictors of academic success in college, typical indicators of the potential to succeed are not as accurate for Black as they are for White students. For example, GPAs and college entrance exam scores are relatively reliable predictors of achievement at the collegiate level for White students but less reliable for predicting Black students' academic performance (Tracey & Sedlacek, 1987b). Tracey and Sedlacek (1987b)

found that academic ability, as indicated by standardized test scores, was predictive of first semester GPA, but neither standardized test scores nor GPA predicted persistence.

There is increasing research on differences between White and Black students when non-cognitive variables are used to predict academic success. Nevertheless, there is little research on the performance of Black male students using non-cognitive variables as a predictor of academic success.

Purpose Statement

The purpose of this study was to examine the relationship between non-cognitive skills and academic achievement in the form of course completion rates and cumulative GPA of African American male community college students. Eight non-cognitive variables were measured and compared to the study subjects' cumulative GPA and course completion rates.

Conceptual Framework

Sedlacek's (2004) Beyond the Big Test: Non-cognitive Assessment in Higher Education served as the conceptual framework for the investigation. The eight non-cognitive variables identified by Sedlacek were used to examine the relationship between non-cognitive skills and the academic achievement of African American males in community colleges.

Sedlacek's model was selected to guide this investigation based on several studies he conducted that indicated a relationship between non-cognitive skills and academic performance. Sedlacek is a champion for non-cognitive skills as a predictor of persisting and achieving in higher education. After years of research, Sedlacek has assembled eight non-cognitive variables that he believes to be accurate predictors of academic performance in higher education. Those variables are (1) positive self-concept; (2) realistic self-appraisal; (3) understanding of and ability to deal with racism; (4) preference for long-term goals over short-term needs; (5) availability of a

strong support person; (6) successful leadership experience; (7) demonstrated community service; and (8) knowledge acquired in or about a field. He has also developed a series of questions to measure these non-cognitive skills in students. A detailed discussion of the conceptual framework appears in Chapter 2.

Research Questions

1. What is the relationship between non-cognitive variables identified by Sedlacek and the course completion rate (courses attempted and courses passed) of African American male community college students?
2. What is the relationship between non-cognitive variables identified by Sedlacek and the cumulative GPA of African American male community college students?
3. Which Non-Cognitive Variables identified by Sedlacek are most predictive of course completion rate and cumulative GPA?

Research Design

This quantitative correlational study examined the relationship between non-cognitive skills and the academic achievement of African American males in community colleges. The achievement variables under investigation included the course completion rate and cumulative GPA of African American males attending a community college during the 2020-2021 academic year. A quantitative method was chosen because it is more effective in measuring and analyzing numerical data (Creswell, 2014). Using this approach, the researcher collected data that was measured to answer questions about the achievement of African American male students at community colleges. The course completion rate was calculated by dividing the total course hours completed by the total course hours attempted (Course completion rate = Total course hours completed/Total course hours attempted). The cumulative GPA was measured by dividing

the total grade points by the total credit points (Cumulative GPA = Total grade points/Total credit points).

The independent variables of the study were the eight non-cognitive variables as identified by Sedlacek: (1) positive self-concept; (2) realistic self-appraisal; (3) understanding of and ability to deal with racism; (4) preference for long-term goals over short-term needs; (5) availability of a strong support person; (6) successful leadership experience; (7) demonstrated community service; and (8) knowledge acquired in or about a field. The dependent variables for the investigation were the course completion rate and the cumulative GPA of African American male community college students.

Significance and Relevance

This study is significant to the African American males currently in higher education. Higher education institutions can use this study to understand further and explain the academic achievement of African American male students in community colleges. In addition, it can provide helpful insight for higher education institutions as they support African American males' academic efforts and for the secondary education systems as they prepare African American males to matriculate to college.

Limitations

The dependent variables, course completion rate and cumulative GPA, were collected and verified by the institution. However, the data collected by the Non-cognitive Variable Questionnaire (NVQ) was self-reported. Therefore, the study was limited in verifying the participants' accuracy and relied on the students' integrity to validate their responses.

Delimitations

1. The Non-cognitive Questionnaire (NCQ), created by Dr. William Sedlacek, was chosen to measure the study participants' non-cognitive skills.
2. The participants of the study were restricted to African American male students attending a Midwestern community college.

Definitions of Terms

The terminology presented here defines those terms necessary to understand the research questions.

- Non-cognitive variables: These variables include emotional maturity, interpersonal skills, and personal experiences. Sedlacek (1999) proposed eight non-cognitive variables to predict minority students' success in higher education:
    - Positive self-concept – "Possesses strong self-feeling, character, determination, independence" (Sedlacek, 1999, p. 539).
    - Realistic self-appraisal – "Recognizes and accepts any deficiencies and works hard at self-development. Recognizes the need to broaden their individuality, especially important in academic areas" (Sedlacek, 1999, p. 539).
    - Understands and Knows How to Navigate the System and Racism – "Is realistic based on personal experience of racism. Not submissive to existing wrongs, nor hostile to society, nor a "cop-out." Able to handle a racist system. Asserts school role to fight racism" (Sedlacek, 1999, p. 539).

    - Prefers long-range goals to short-term or immediate needs – "Able to respond to deferred gratification" (Sedlacek, 1999, p. 539).
    - Availability of healthy support person – "Individual has someone to whom to turn in crises" (Sedlacek, 1999, p. 539).
    - Successful leadership experience – "Has experience in any area pertinent to his or her background (e.g., gang leader, sports, non-educational groups)" (Sedlacek, 1999, p. 539).
    - Demonstrated community service – "Is involved in his or her cultural community" (Sedlacek, 1999, p. 539).
    - Knowledge acquired in or about a field – "Has unusual or culturally related ways of obtaining information and demonstrating knowledge. The field itself may be non-traditional" (Sedlacek, 1999, p. 539).
- The Non-cognitive Questionnaire (NCQ): was constructed to measure non-cognitive variables (Tracey & Sedlacek, 1984, 1989).

Summary

This chapter introduced the disparity between African American and Caucasian students regarding academic performance in higher education. Studies show that both cognitive and non-cognitive skills are essential for academic achievement in higher education. Still, as reflected by GPA and standardized test scores, cognitive skills have been traditionally used to predict students' academic achievement at the collegiate level. However, research has indicated that non-cognitive variables may significantly predict academic achievement for African American males. Unfortunately, most research on the relationship between non-cognitive skills and academic performance in higher education has studied Caucasian students instead of

underrepresented groups. After years of research, William Sedlacek has assembled eight non-cognitive variables that he believes to be accurate predictors of the ability of African Americans to be successful in higher education.

Organization of the Study

The remainder of the dissertation is organized into four chapters, a list of references, and appendices. Chapter 2 reviews the related literature regarding evolving trends in cognitive and non-cognitive variables to predict students' academic achievement in higher education. Chapter 3 describes the research design and methodology of the study. The instrument used to gather the data, the procedures followed, and the determination of the sample selected for the study are also explained in chapter 3. Chapter 4 presents the results of the data analysis, and chapter 5 concludes the study with a discussion of the results.

Chapter 2 - Literature Review

The purpose of this study was to determine the relationship between non-cognitive variables and academic achievement as measured by course completion rates and cumulative GPA. This literature review is organized into eight major topics: 1) An overview of the literature review process, 2) The theory of successful intelligence, 3) Cognitive vs. non-cognitive skills, 4) Non-cognitive skills and academic achievement, 5) The origins of the eight non-cognitive variables, 6) The Non-cognitive Questionnaire (NCQ), 7) Cognitive predictors of academic performance, and 8) African American Males and academic achievement.

The Literature Search

Searches were conducted using Kansas State University's library databases to discover evidence and documentation for this study. Databases used in this study included Education Full Text, Educational Resources Information Center (ERIC), ProQuest Dissertations and Theses, Sage Publications, and PsycInfo (APA). Some articles were found in Kansas State University's library after being listed in the reference sections of other articles. A journal article from 1965 and 1979 was included to demonstrate the evolution of the term non-cognitive and the historical attempts to predict academic performance. Some articles from the 1980s were included because they depict pivotal studies responsible for identifying and refining Sedlacek's eight non-cognitive variables and his resulting Non-cognitive Questionnaire (NCQ). However, most of the articles referenced are from 1992 to 2017.

Additionally, the Southfield Library offered an interlibrary loan program. Occasionally, articles were located using various search engines such as Google Scholar. Search criteria included but were not limited to non-cognitive predictors of academic success in higher education, non-cognitive predictors of African American male academic achievement in

community college, the relationship between non-cognitive variables and academic performance, the Non-cognitive Questionnaire as a predictor of academic performance, and individual searches of Sedlacek's eight non-cognitive variables.

Theory of Successful Intelligence

The theory of successful intelligence is included in this literature review due to the relationship between non-cognitive variables and Sternberg's experiential and contextual domains. Sedlacek (2005) contended that non-cognitive variables fall under the domain of Sternberg's (1996) experiential and contextual domains, while standardized tests belonged in the domain of componential. Sternberg explained the following:

The triarchic theory of successful intelligence defines successful intelligence in terms of one's ability to succeed according to what one values in life within one's socio-cultural context. One achieves success through a balance of adaptation to, shaping of, and selection of environments. One optimizes these interactions with the environment by recognizing and capitalizing on one's strengths and recognizing and correcting or compensating for one's weaknesses. (p. 400)

The theory of successful intelligence asserts that people succeed by recognizing and leveraging their strengths and acknowledging and compensating for weaknesses (Sternberg, 1997, 1999). This situation occurs through the convergence of analytical, creative, and practical abilities (Sternberg, 1997, 1999). Individuals achieve success within specific socio-cultural contexts when their analytical, creative, and practical abilities work together (Sternberg, 1997, 1999). Analytical abilities refer to the ability to gather, evaluate, compare, and contrast pieces of information. Creative abilities involve generating new ideas, being inventive, and thinking

divergently. Practical abilities are responsible for the application of what is learned to the appropriate context.

Sternberg's theory of successful intelligence (1996) was most relevant to this study's focus on identifying non-cognitive variables predictive of academic performance. Sternberg (2008) offered the theory of successful intelligence to enhance academic performance predictions and achieve more significant equity and diversity in higher education. The study utilizes the Non-cognitive Questionnaire (NCQ) instrument developed by Sedlacek. The questionnaire is based on the eight non-cognitive variables he identified as having a significant influence on academic achievement. Sedlacek identified and defined the eight non-cognitive variables based on the logic behind Sternberg's work and extensive research on the theory of successful intelligence (Sedlacek, 2003, 2004).

Cognitive vs. Non-cognitive Skills

Studies focusing on the factors contributing to students' success in higher education can be divided into two main attributes: cognitive and non-cognitive. Individual characteristics (cognitive variables) consist of more traditional predictors of academic potential, such as high school grade point averages and test scores (Bush & Bush, 2010). Other indicators of collegiate aptitude (non-cognitive variables) include student perceptions, ability to navigate social systems, motivation, and personal traits (Sedlacek & Kalsbeck, 2017).

Scholars and researchers have long proposed that student success is dependent on specific other non-academic skills (Bandura & Schunk, 1981; Ames & Archer, 1988; Zimmerman, 1990). Although the idea of cognitive skills has received much greater attention than the concept of non-cognitive skills, both are problematic to precisely define and challenging to measure separately without consideration of the other (Duckworth et al., 2011; Gardner, 2004; Heckman

& Kautz, 2014; Sternberg, 2008a). Recently, increasingly more focus has been directed toward measuring and changing characteristics other than cognitive capacity (Heckman & Kautz, 2014; Naemi et al., 2012; Stecher & Hamilton, 2014; Tough, 2013). Non-cognitive qualities vary and have been shown through research to be strong predictors of academic, economic, social, psychological, and physical well-being (Almlund et al., 2011; Borghans et al., 2008; Farrington et al., 2012; J. Jackson et al., 2015; Moffitt et al., 2011; Naemi et al., 2012; Yeager & Walton, 2011).

Trusted performance activities, such as standardized tests and instructor evaluations of students, have accurately measured academic aptitude and academic performance for over a century (Roberts et al., 2005). However, measures for non-cognitive characteristics have not been given the same attention. One reason for the delay in creating measures of non-cognitive traits may be the failure to agree on a universal definition for the term (Garcia, 2014). The word non-cognitive infers everything else outside of intellectual abilities and subject-matter mastery (Messick, 1979). This definition over-simplifies the significance of the term. Although everyone has a rough idea of what non-cognitive refers to when the word is used, this definition over-simplifies the substance of the term (Easton, 2013).

Separating cognitive and non-cognitive factors can prove challenging because "few aspects of human behavior are devoid of cognition" (Borghans et al., 2008, p. 974). The researchers suggested that cognitive and non-cognitive factors must interact for learning to occur. Furthermore, cognition changes depend on this interaction (Bransford et al., 2000). Studies in human cognition have shifted from solely focusing on the brain in isolation to the consideration of the context in which it exists, "including the environment, perception, action, affect, and socio-cultural systems" (Barsalou, 2010, p. 325). Barsalou (2010) further states that

"continuing to study cognition as an independent isolated module is on the fast track to obsolescence" (p. 325).

Non-cognitive skills are generally considered personality characteristics or "patterns of thought, feelings, and behavior" (Borghans et al., 2008). However, the field of study determines the specific skills that are being referenced. Psychologists group non-cognitive skills into five categories: the "Big Five": openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism (Bernstein et al., 2007). Conversely, educators concentrate on abilities that are associated with academic achievement. The University of Chicago's Consortium on Chicago School Research reasoned that the non-cognitive skills with the most substantial relationship to scholastic achievement were: academic behaviors, academic perseverance, academic mindsets, learning strategies, and social skills (Farrington et al., 2012).

Non-cognitive Skills and Academic Achievement

As measured by grade point averages and standardized test scores, cognitive skills have long been associated with academic achievement and utilized to predict future academic success. While standardized test scores continue to be used in the selection criteria for college admissions, the debate continues to escalate regarding their adequacy to predict college performance. Some researchers propose that non-cognitive skills are equally, if not more important, than cognitive factors in academic achievement. Recent studies have given more credence to the importance of non-cognitive skills and factors concerning academic success (Stankov & Lee, 2014). Therefore, non-cognitive traits are essential and should be taken seriously (Barrett, 2014). Some researchers believe that there is an overemphasis on test preparation and test performance that do not necessarily speak to the applicants' real potential to succeed in college after admission (Robbins et al., 2004).

Research suggests that examining psychosocial or non-cognitive factors may be particularly useful in selecting minority students (Allen, 1999) or for highly selective institutions choosing from a pool of candidates with a narrow range of abilities (Furnham, Monsen, & Ahmetoglu, 2009). Among the personality traits that have been studied, conscientiousness stands out from psychosocial factors as a strong predictor of academic performance (Conrad, 2006; Noftle & Robins, 2007). O'Connor and Paunonen (2007) completed a meta-analysis of 25 studies resulting in a substantial and positive relationship between conscientiousness and academic achievement. Although conscientiousness is significantly correlated with high school and college GPA (Kaufman et al., 2008), most studies suggest either no relationship or a slight negative relationship between conscientiousness and standardized test scores (Conard, 2006). This finding is consistent with studies suggesting the relationship between conscientiousness and academic performance is apparent in the persistence of students to continue learning over time. This measure is not usually provided by standardized tests taken at a specific point in time (Perlow & Kopp, 2004). Openness and agreeableness are personality traits positively related to academic performance (Poropat, 2009). Schmitt et al. (2009) found that non-cognitive indicators were better predictors of contextual behaviors, particularly class absenteeism and organizational citizenship behaviors.

The Origins of the Eight Non-cognitive Variables

William Sedlacek has conducted a significant amount of research surrounding non-cognitive variables and academic achievement for what he labels as "non-traditional students" (Sedlacek, 2004). The definition of a non-traditional student varies, but researchers consider them to have one of the following characteristics: financially independent for financial aid consideration, delayed postsecondary enrollment, has one or more dependents, is a single

caregiver, does not have a high school diploma, attends school part-time, or works full-time (Brock 2010; Choy 2002; Horn 1996; Kim 2002; Taniguchi and Kaufman 2005). Sedlacek (2004) describes non-traditional students as "people with cultural experiences different from those of White, middle-class, heterosexual, males of European descent, those with less power to control their lives and those who experience discrimination in the United States" (p. 4).

Sedlacek developed the non-cognitive assessment model from over thirty years of research, beginning with data studies from "items, scales, or measures that seemed to have some validity for diverse groups" (Sedlacek, 2004, p. 35). A cycle of developing new versions of measures, testing the validity and reliability of the results in numerous studies, and making revisions to those measures to complete more studies, led to an improvement of the measure and the establishment of some prevailing theories and explanations (Sedlacek, 2004). In addition, his research efforts guided the identification of eight non-cognitive variables (NCV) that are beneficial in evaluating diverse populations (Sedlacek, 2004). The eight non-cognitive variables are Positive Self-Concept, Realistic Self-Appraisal, Successfully Handling the System (Racism), Preference for Long-Term Goals, Availability of Strong Support Person, Leadership Experience, Community Involvement, and Knowledge Acquired in a Field (Sedlacek, 2004, 2011, 2017; Tracey & Sedlacek, 1982, 1984, 1985).

Positive Self-Concept

College success can be directly linked to student academic achievement as measured by GPA and persistence. Employing non-cognitive variables has been shown to increase the predictive power of academic achievement among Black and White students (Tracey & Sedlacek, 1982). Possessing a positive self-concept provides students with a sense of competence and confidence to perform at a sufficient level academically to succeed in college.

The college student encounters new knowledge and processes that must be understood, analyzed, and utilized to demonstrate subject mastery throughout the college experience. Confident students may not initially understand a new concept, but confident students believe they can study, comprehend, and demonstrate new material mastery.

A positive self-concept reinforces the notion that efforts to be successful academically are not made in vain. Working hard and devoting time to studies can help achieve positive results in the classroom in the form of high-grade point averages and pass rates. Higher education can be academically challenging for students regardless of their prior preparation, but students of color face additional obstacles to overcome. These obstacles are genuine for students attending community colleges. The open-door policy allows potential students to enroll who may not meet the admissions criteria of traditional colleges and universities.

The perceived options of roles minority groups can identify with are further restricted by social norms and stereotypes. The media and popular culture have traditionally promoted images of Black people in roles other than scholars such as athletes and entertainers. Students of color feel their minority status on the campuses of colleges and in the classrooms therein. This feeling of being a minority is further intensified by the racial and ethnic make-up of the faculty and staff on college campuses. African American males are more likely to enroll in classes led by Caucasian faculty than African American professors. Black males accounted for 3% of full-time faculty members among degree-granting institutions during fall 2017 while White males, White females, and Asian/Pacific Islander males made up 54%, 27%, and 8% of full-time faculty respectively during the same semester (The Condition of Education—Postsecondary Education—Postsecondary Institutions—Characteristics of Postsecondary Faculty—Indicator May 2019, n.d.).

Realistic Self-Appraisal

Sedlacek (2004) identified a realistic self-appraisal, an ability to recognize and accept deficiencies, and the desire to work hard at self-development as a non-cognitive variable that is an accurate predictor of academic achievement. A realistic self-appraisal is a practical start in assessing areas of strengths and weaknesses. Realism in self-appraisal by students of color should not be viewed as a reflection of cultural or racial deficiency or inferiority (Sedlacek & Kalsbeck, 2017). Instead, it empowers students to accurately assess where they stand academically and provides an opportunity to build upon strengths and strengthen weaknesses to enhance collegiate performance. Realistic self-appraisal is a predictor of success for students of all races and genders (Sedlacek, 2004).

Rotter (1966) studied the individual differences in perception of internal versus external control of reward and reinforcement. He proposed that people's reward expectancy and behavior were contingent on whether they believed a situation was controlled internally or externally. Researchers have found a relationship between internal control and academic success among college students (Beck et al., 2000; Jansen & Carton, 1999).

Sedlacek and Kalsbeck (2017) argued that White students perform well academically due to institutions designed to meet their needs. In contrast, students of color must be conscious of the external controls associated with navigating racism. African Americans who were more realistic about their abilities and external obstacles were more likely to persist in their academic studies (DiCesare et al., 1972). Besides, African Americans, Latinos, and Native Americans indicated external factors as barriers to success compared to White and Asian American students. The latter perceived intrinsic interest in a field as the primary barrier to reaching their career goals (Perrone et al., 2001).

A correlation was found between a realistic self-appraisal and college grades, retention, and graduation for students of all races. Still, the relationship was particularly strong for African Americans (Tracey and Sedlacek, 1982, 1984, 1985, 1987a, 1987b, 1989). A realistic expectation of the degree of difficulty of academic work was positively related to the grades received by female African American medical students (Webb et al., 1997). A correlation between a higher realistic self-appraisal and higher grades was found for international students (Boyer & Sedlacek, 1988). International students with a higher realistic self-appraisal were also more likely to persist from semester to semester than those with lower scores on the variable (Boyer & Sedlacek, 1988).

The System and Racism

The definition of racism continues to be debated in academia. Hoyt (2012) defined racism in terms of intent when he expressed it as "a particular form of prejudice defined by preconceived erroneous beliefs about race and members of racial groups." Sedlacek and Kalsbeck (2017) based their definition on outcomes or results and identified two distinct types of racism: individual racism and institutional racism. Individual racism occurs when a person's actions or words "affect another person negatively because he or she is a member of another group" (Sedlacek & Kalsbeck, 2017). Institutional racism specifies "the negative consequences that accrue to a member of a given group because of how a system or subsystem operates in the society, regardless of any other attributes of the individual" (Sedlacek & Kalsbeck, 2017).

Sedlacek and Kalsbeck (2017) further stated that institutional racism includes policies, procedures, or behavior patterns that adversely affect members of one group compared to another group. Williams, Neighbors, and Jackson (2003) described racial discrimination as the behavior of a dominant racial group that has an inequitable effect on the members of a non-dominant

racial group. The majority of African Americans have been subjected to racial discrimination (Kessler et al., 1999). The path to adulthood is laden with institutional racial discrimination, which disadvantages African Americans (Bonilla-Silva, 2001; Feagin, 2006; Wilkes & Iceland, 2004).

Studies have implied that racial discrimination is associated with increased mental health challenges among African Americans (Brown et al., 2000; Carter, 2007; Greene et al., 2006; Polanco-Roman & Miranda, 2013; Sellers & Shelton, 2003). A study regarding perceived racial discrimination during adolescence showed a positive relationship between an increase in perceived racial discrimination and an increase in adverse mental health symptoms among Black males (Assari et al., 2017). Research has consistently shown a high correlation between managing racism and achieving academic success for students of color (Sedlacek, 2004, 2011).

However, success does not come without costs for African Americans who persist and succeed despite the negative impact of racism. Accelerated aging and higher hypertension and heart disease rates await African Americans who utilize large amounts of self-control and grit to overcome racism (Hamblin, 2015). A study of approximately 300 Black youth between 17-20 years of age found that although they were successful academically and had healthy lifestyles, these young people exhibited poor cardio metabolic health in the form of obesity, blood pressure, and stress hormones (Miller et al., 2015).

Long-Term vs. Short-Term Goals

Having long-term goals is a predictor of success in college for students. Baumeister et al., (2007) described self-control as the ability to adjust one's actions to align with long-term goals related to personal standards and values. Persisting toward the long-term goal of attaining academic credentials requires students to resist the temptations of succumbing to short-term

gratification. A sample of predominately White university students revealed a positive relationship between perceptions of accomplishing long-term goals and achieving higher student grades and graduation rates in college (Fauria & Zellner, 2014).

Although Black students are not as predictable in their first year of college as their White counterparts, their success becomes just as predictable by their second year of college (Sedlacek, 2004). Accordingly, students who make long-term goals fare better in college than those who do not (Sedlacek & Sheu, 2008). For student-athletes at North Carolina State University, "the scale of the long-term goal" of the Non-cognitive Questionnaire (NCQ) was found to be a significant predictor of GPA (Ting, 2009). A study of 13,555 students across eight institutions, comprised of two- and four-year colleges, revealed that those receiving coaching on succession planning and strategies to achieve long-term goals were more likely to persist in college than those not coached (Bettinger & Baker, 2014).

Strong Support Person

Students who perform well academically typically have access to a person who has had a significant influence on them who offers advice, especially during periods of crisis (Sedlacek, 2004). Curtin et al., (2013) discovered this to be true for both U.S. and international graduate students. A support person could be fulfilled by someone in the education system or the immediate family, but it is usually a relative or a community member for non-traditional students (Sedlacek & Kalsbeck, 2017). Support from family, friends, faculty, and student services staff was associated with academic achievement in the form of higher grades and graduation (Fauria & Zellner, 2014).

Support systems available to traditional students are not readily accessible to many students of color (Sedlacek & Kalsbeck, 2017). Consequently, non-traditional students who

have demonstrated the ability to develop supportive relationships in educational institutions that are not necessarily designed for them fare better than those who have not had this experience (Sedlacek & Kalsbeck, 2017). Sedlacek (2004) found that increased involvement in academic course work, other students, and student services improve students' chances of identifying a support person. Washington State Achievers (WSA) scholarship recipients who were chosen based on non-cognitive variables showed a positive correlation between support and encouragement from people in the education system and time spent in academic activities (Sedlacek & Sheu, 2005). Although GPA was the best predictor of academic success for Black students attending predominantly White colleges, the quality of student-faculty interactions was the best predictor of academic success for Black students attending historically Black institutions (Cokley, 2000).

Successful Leadership Experience

Leadership experience can be acquired in many different ways. Non-traditional students who have demonstrated the ability to organize and influence others tend to be most successful in higher education (Sedlacek & Kalsbeck, 2017). The college application allows applicants to showcase their leadership experience. Traditional students are more likely to have deliberately participated in activities that demonstrate leadership capacity before applying for college (Sedlacek & Kalsbeck, 2017). Unfortunately, for many students of color unfamiliar with the importance of leadership experience in the college application process, participation in such activities is not considered (Allen, 1992).

Leadership development remains a constant focus in higher education (Burkhardt & Zimmerman-Oster, 1999; Dugan, 2006). Recent research has seen a shift in the idea of leadership focusing on individual characteristics, use of power, and accomplishing tasks to a

more collaborative approach where leadership is more of a partnership between leaders and followers (Dugan, 2006; Komives et al., 1998; Komives et al., 2006; Rogers, 2003). This change in emphasis recognizes that leadership styles may differ across gender and race (Balon, 2005; Dugan, 2006; Rogers, 2003). Leadership development has been a fundamental goal of student affairs programs (Komives et al., 2006). Studies indicate that students of color who demonstrate an aptitude for leadership before entering college have a higher chance of success academically than students without leadership experience (Sedlacek, 2004; Sedlacek & Sheu, 2013).

Demonstrated Community Service

Non-traditional students who identify with a community they can turn to for support are more successful college students (Sedlacek, 2004). Non-traditional students learn how to navigate the system, demonstrate leadership, and develop their self-concept when they are active in the community (Sedlacek, 2004). Sedlacek concluded that students of color are more likely to develop a supportive community when they are involved academically with coursework and other students (Sedlacek, 2004). Numerous student affairs programs are created to support student success and help them experience a sense of community on and off-campus. Student unions play a significant role in providing African American students with a sense of community (Webster & Sedlacek, 1982). Mallinckrodt and Sedlacek (2009) found that African American and international students who used the athletic facilities on campus persisted at higher rates than other students.

Community involvement is a significant predictor of academic achievement for African Americans (Allen, 1992; Tracey & Sedlacek, 1984, 1985, 1987a, 1989; Tracey et al., 1983; White & Shelley, 1996). Identifying with a community has been linked to the academic success of Asian Americans (Fuertes et al., 1994) and male and female athletes of all races (Sedlacek &

Adams-Gaston, 1992). The community's value has been noted in retaining Latino and Native American students (White & Shelley, 1996). A correlation was shown between "underrepresented minorities" with a race-based community and college graduation (Bennett, 2002). Sedlacek (2004) noted that "scoring high on community involvement scale (as measured by the NCQ) was related to high college grades for Gates Millennium Scholars of color (African American, American Indians, Asian Americans, and Latinos)." A correlation was found between community involvement and academic success for undergraduate women (Ancis & Sedlacek, 1997) and White students in special programs (Ting, 1997). Community involvement was significant for international students' scholastic achievement (Boyer & Sedlacek, 1988; Moore, 1995).

Perceptual mapping was found to help identify communities that may be important to college students on campus (Mitchell et al., 1997; Sergent & Sedlacek, 1989). Perceptual mapping is a physical setting approach to environmental assessment "that uses maps in both the data collection and the data presentation stages of research" (Sergent & Sedlacek, 1989). Respondents use actual maps of interior and exterior spaces to indicate interest areas and their perceptions of those areas (Sedlacek, 2004). Mitchell et al. (1997) found that African American and White students select different areas as positive or negative based on their encounters with the communities in those spaces.

Knowledge Acquired in or About a Field (Nontraditional Learning)

Learning occurs in many different ways throughout a person's life. Traditional learning occurring inside the classroom is regulated by established guidelines and can be easy to measure. In contrast, non-traditional learning often occurs outside of the classroom and can be quite different from the experience of a traditional student. A non-traditional education can be a

valuable asset to the student seeking to pursue learning in higher education. The non-traditional learning acquired by student-athletes at North Carolina State University measured by Sedlacek's Non-cognitive Questionnaire (NCQ) was a significant predictor of GPA and retention of this group (Ting, 2009).

Persons of color are more likely to learn in non-traditional ways outside of the formal education system (Sedlack, 2004). In addition, several researchers have demonstrated the predictive power of non-traditional learning for the academic achievement of particular groups: African Americans (Tracey & Sedlacek, 1984, 1985, 1987a, 1989); Latinos (Fuertes & Sedlacek, 1994); international students (Boyer & Sedlacek, 1988); individual program students (Ting, 1997); and women (Ancis & Sedlacek, 1997).

Women and students of color who have demonstrated acquisition of non-traditional learning before attending college have achieved better outcomes in college than those who exhibit no such evidence (Sedlacek, 2004). Sedlacek (2004) presents the following examples of this type of learning: learning some accounting principles by working in a neighborhood food cooperative or learning about chemistry through volunteer work in a hospital. Substantial learning can be obtained through volunteer work (Altman & Sedlacek, 1991; Balenger & Sedlacek, 1993; O'Brien et al., 1994; Sergent & Sedlacek, 1990).

The Non-cognitive Questionnaire (NCQ)

The Non-cognitive questionnaire was developed based on the Non-cognitive Assessment Model (NAM) that contains Sedlacek's eight non-cognitive variables. It was designed to measure psychosocial factors that contribute to academic achievement and consists of 23 items: 18 Likert-formatted, two multiple choices, and three open-ended (Tracey & Sedlacek, 1984, 1989). Construct validity was found for scores on the eight measurements of the NCQ for

African American and European American samples (Tracey & Sedlacek, 1984a, 1984b; Woods & Sedlacek, 1988; Ting & Sedlacek, 2000). Several different samples showed two-week reliability estimates on NCQ scores in the range of .74 to .94 for NCQ items (Tracey & Sedlacek, 1984a). The NCQ provided better predictability of first-year GPA than the SAT score for African American students at the City University of New York (Warmsley, 1998). It was also shown to effectively predict the academic performance of multiple student populations, including Asian Americans (Fuertes et al., 1994); African Africans (Boyer & Sedlacek, 1988; Sedlacek & Adams-Gaston, 1992); Hispanics (Fuertes & Sedlacek, 1995); White and African Americans (Ting & Robinson, 1998; Tracey & Sedlacek, 1984a, 1985, 1987a), specially admitted students (Ting, 1997; White & Sedlacek, 1986) and low-income and first-generation students (Ting, 1998).

Use of the Non-cognitive Questionnaire

Many programs and institutions have used non-cognitive variables or created tests similar to Sedlacek's non-cognitive questionnaire (Sedlacek, 2004). Some of these tests have significantly enhanced the ability to predict first-year college GPAs compared to the use of SAT scores alone (Sternberg, 2008b; Sternberg et al., 2012). Furthermore, several studies have shown decreased test scores among diverse ethnic groups (Sternberg 2008b; Kalsbeek et al., 2013).

The American Association of Collegiate Registrars and Admissions Officers (AACRAO) is a professional association of education professionals working in higher education admissions, records management, enrollment services, administration information technology, and student services. AACRAO Consulting employs Sedlacek's non-cognitive variable model to assist members in implementing selection and post-matriculation assessment (AACRAO, 2014). AACRAO's FairSelect is a researched-based tool to assist institutions in measuring non-

cognitive variables to take a more equitable approach to a comprehensive and holistic student selection across a wide range of student diversity factors (AACRAO, 2013).

Virginia Commonwealth University (VCU) utilizes FairSelect in addition to grades and test scores in its admissions process (Sedlacek, 2017). Vice provost of VCU, Luke Schultheis, noted a relationship between non-cognitive variables and retention when he revealed the retention rates for students with the lowest non-cognitive scores (77%) compared to students with the highest non-cognitive scores (86%) from fall 2014 to fall 2015 (personal communication between Schultheis and Sedlacek, 2015).

The Gates Millennium Scholar (GMS) program utilized an assessment model based on Sedlacek's eight non-cognitive variables to evaluate scholarship applicants from a pool of students of color who demonstrated financial need based on their Pell grant eligibility (Sedlacek, 2004; Sedlacek & Sheu, 2004, 2008). The academic potential was the criteria for selecting the Scholars; however, "that potential was likely shown in ways other than test scores and grades" (Sedlacek & Sheu, 2004, 2008). The GMS application process considered the applicants' responses to the NCQ in unison with an assessment of their high school curriculum and a writing sample based on their desire to become a GMS (Sedlacek & Sheu, 2008). The GMS program's objectives were to evaluate students' academic potential and demonstrate their capabilities in ways not captured by standardized tests and previous grades (Sedlacek & Sheu, 2004, 2008). "The measure of non-cognitive variables employed in selecting Scholars showed high internal consistency reliability for its scores (.92)" (Sedlacek & Sheu, 2008, p. 2).

A comparison of Scholars and Non-Scholars revealed GMS students were performing at a higher level concerning GPA attained, time spent studying, involvement in academic activities, and aspirations (Sedlacek & Sheu, 2004, 2008). GMS students were also more likely to persist

and remain committed to earning a degree at their current institution. Almost all scholars (95%) stated a low probability of dropping out and had made a firm commitment to earn a degree from their current institution (Sedlacek & Sheu, 2004, 2008). Most scholars (90%) anticipated earning an advanced degree at the master's level or beyond (Sedlacek & Sheu, 2004, 2008). Positive self-concept, realistic self-appraisal, understanding/navigation of social systems, and community service were associated with a higher GPA for scholars (Sedlacek & Sheu, 2004, 2008).

Critics of the Non-cognitive Questionnaire

The non-cognitive questionnaire is not without its critics. With the support of the College Board, the creators of the SAT, Thomas et al., (2007), published a meta-analysis on the use of the Non-cognitive Questionnaire (NCQ) in college admissions. The study attempted to evaluate the predictive validity of NCQ scores using meta-analytic methods (Thomas et al., 2007).

> Our results suggest that NCQ scores are primarily unrelated to college performance measured by GPA, college persistence, and credits earned. The NCQ, as a whole, was not found to be a good selection tool for admissions purposes. Assuming colleges and universities are concerned about predicting grades, college persistence, and credits earned, our results suggest that the NCQ should not be used for admissions decisions. For the persistence criterion, only one correlation greater than .10 was obtained. The GPA analyses included a sufficient number of studies to place confidence in the 90% credibility intervals. The intervals are narrow and include zero for all scales, suggesting that the validity of the NCQ scores probably do not vary much from zero from situation to situation. (p. 648)

Thomas et al. (2007) acknowledged that, on average, African Americans score higher on the NCQ than European American students but claims the predictability of the NCQ of academic performance is flawed based on their argument of the poor validity scores on the NCQ. Further, they contend that the use of the NCQ in admission decisions is paramount to assigning "bonus points for a race in an admission decision" (p. 649), which they contend is risky given related court decisions (Gratz v. Bollinger, 2003; Grutter v. Bollinger, 2003). Finally, the argument presented by Thomas et al. (2007) about the initial validation study (Tracey & Sedlacek, 1984) and several subsequent studies is that "only some of the NCQ subscales predicted GPA across each semester, and none of the subscales predicted GPA for all semesters, suggesting that the associations are likely chance relationships" (p. 649).

Thomas et al. (2007) recognized the significance of the constructs on which the NCQ is based, citing Breland (1981) and Lavin (1965), who reported that non-cognitive variables were helpful predictors of academic performance. However, they maintain "that the lack of validity of the scores on the NCQ is due to the measurement properties of the NCQ" (p. 650) and assert that better results could be obtained "if the constructs were operationalized differently" (p. 650). Indeed, instruments with low reliability cannot yield legitimate data on the behavior it measures. Unreliable test scores lower the perceived correlations with academic outcomes such as GPA (Reinhardt, 1996; Vacha-Haase et al., 2002).

Cognitive Predictors of Academic Performance

Reason (2003) defined cognitive predictors as objective measures of academic capability that include a numerical score and are traditionally used to assess future academic success for students. High school grade point average and standardized college entrance exams are two common cognitive predictors for incoming freshman college students. The College Board has

conducted years of research on predictors of academic achievement in college, including high school GPA and standardized test scores (Camara & Echternact, 2000).

Research has shown empirical evidence to support the idea of cognitive capacity as a valid predictor of academic performance in college. Standardized test scores and high school GPA were reported as primary predictors of cumulative college GPA (Schmitt et al., 2009). High school GPA was the leading predictor of first-semester college GPA and more consistent than high school percentile rank and ACT scores (Adebayo, 2008). It was also noted that high school GPA demonstrates some elements of non-cognitive skills and is a more helpful predictor of retention, while standardized test scores were more accurate predictors of college performance (Noble & Sawyer, 2004; Sawyer, 2007).

Kuncel and Hezlett (2010) conducted a meta-analysis of multiple studies resulting in strong support for multiple cognitive tests as significant predictors of academic success outcomes such as first-year GPA, graduate GPA, degree attainment, and comprehensive examination scores. Sackett et al., (2009) examined multiple, large data sets to conclude that cognitive tests strongly correlate to college GPA. Consequently, there is strong support for cognitive tests as predictors of some of the variance in college performance.

African American Males and Academic Achievement

The desegregation of education was intended to provide equal access to education regardless of race and ethnicity and debunk the notion of separate but equal educational systems being fair. Teachers' competence and expectations in unison with the quality of education affect student achievement and outcomes within an education system. Compared to White students, one of the reasons Black students underachieve academically is due to the inferior education systems to which they are subjected (Palmer & Maramba, 2011). In the past, teachers and

administrators worked with parents and the Black community to negate the effects of a flawed education system. For many years, the Black community rallied around African American students to support their academic achievement in a weak education system, but the support has dwindled (Palmer & Maramba, 2011).

African American males who choose to pursue postsecondary education are more likely to begin at community colleges (Bush & Bush, 2010). Over 70% of Black men begin their academic careers at a community college (BPS, 2009; Harris et al., 2015; Wood et al., 2015). The motivation for Black males to pursue higher education at the community college includes securing steady employment, attaining financial security, and achieving social status (Bush, 2004; Wood & Palmer, 2013a). African American men often view community college as a means to a better lifestyle for themselves and their families (Wood et al., 2014). "It often becomes the only means available for upward mobility" (McPhail, 2003). They may also see community college as a way to serve their local communities (Wood & Palmer, 2013b). In this regard, the community college represents the gateway to a path of upward social and economic mobility (Bush & Bush, 2010; Wood & Palmer, 2013b). A deeper dive into the characteristics of African American males attending a public two-year institution reveals a distinct difference from their counterparts who have gained admissions into four-year institutions. Black males attending two-year colleges tend to be older, more likely to be independent with dependents, and married (Wood, 2013).

The community college's primary mission to provide access to all who desire to pursue a higher education eliminates the barriers imposed by the selective admission practices commonly used by four-year colleges and universities. "Community colleges are unique in that this open-access policy makes us a giant melting pot" (McPhail, 2003). In effect, community colleges

serve the most diverse student populations to pursue their open-access mission (Bahr, 2011; Bailey et al., 2001; Bukoski & Hatch, 2016). The community college may be their only means of obtaining a college degree or certificate (Bush & Bush, 2005, 2010; Cohen et al., 2014). The "open door" policy allows students to gain admission regardless of their academic acumen, as reflected by high school grades and standardized test scores (Cohen et al., 2014).

African American men achieve at lower rates as measured by academic outcomes than women and other ethnic groups. A community college in Southern California released data that revealed the trend of low academic outcomes for African American men in California community colleges to be consistent with this population's performance in other academic institutions; this population exhibited the lowest rates of achievement among all student groups at this community college (Bush & Bush, 2010). The National Center for Education Statistics (NCES) collected data on graduation rates from two-year degree-granting postsecondary institutions participating in Title IV federal student financial aid programs. Although an average of 30% of first-time, full-time undergraduate students who began fall 2013 completed their program of study within 150% of the average time required, Black students fell well below the average with a graduation rate of 23% within the same period (Snyder et al., 2019). Data collected on the beginning postsecondary students of 2003-2004 reveal that 11.5% of Black men attending a two-year institution left within the first year without attaining a degree (U.S. Department of Education, 2009). That rate increased to 48.9% by year three and went up to 83% by year five (U.S. Department of Education, 2009).

Summary

This chapter described the background and the fundamental concepts of the research conducted. Next, the literature review described how the evidence and documentation for this

study were gathered. It began with a discussion of the literature search process followed by Sternberg's theory of successful intelligence related to Sedlacek's non-cognitive variables. Then, the literature review examined the non-cognitive variables Sedlacek identified and the Non-cognitive Questionnaire (NCQ) he developed to measure them. Finally, it considered cognitive predictors of academic performance, college readiness in general, and the current academic performance of the research subject, African American males.

The literature review revealed growing support for the role of non-cognitive measures in predicting academic performance in higher education. While more studies are being conducted on the relationship between non-cognitive variables and academic achievement, few have been focused on its implications on the African American male population in community colleges. Sedlacek has been a champion for examining the relationship between non-cognitive variables and the academic achievement of minority groups. The literature review contributes to a deeper understanding of previous research on the implications of non-cognitive variables as predictors of GPA and course completion rates for African American males in community colleges.

Chapter 3 - Methodology

This chapter details the research methods used in this study to examine the relationship between specific non-cognitive variables and the academic achievement of African American males in community college. First, the purpose of the study and research questions are restated. The following section in the chapter describes the non-cognitive variables and the Non-Cognitive Questionnaire (NCQ). The chapter closes with a description of study participants, settings, procedures, and an overview of the data analyses.

Purpose

The purpose of this quantitative study was to examine the relationship between non-cognitive skills and academic achievement in the form of course completion rates and cumulative GPA of African American students. In addition, this study also sought to identify which non-cognitive variables were most predictive of African American males' course completion rate and cumulative GPA.

Research Questions

Three research questions guided the investigation:

1. What is the relationship between non-cognitive variables identified by Sedlacek and the course completion rate (courses attempted and courses passed) of African American male community college students?
2. What is the relationship between non-cognitive variables identified by Sedlacek and the cumulative GPA of African American male community college students?
3. Which Non-Cognitive Variables identified by Sedlacek are most predictive of course completion rate and cumulative GPA?

Research Design and Rationale

This quantitative correlational study examined the course completion rate and cumulative GPA of African American males attending a community college during the 2020-2021 academic year. A quantitative method was chosen because it is effective in measuring and analyzing numerical data (Creswell, 2014).

The relationship between non-cognitive variables identified by Sedlacek and the two measurements of academic achievement, course completion rate and cumulative GPA were examined for African American male students in the community college. This study examined the academic performance of African American males who attended a community college during the 2020-2021 school year. The academic performance was examined in relation to the eight non-cognitive variables identified by Sedlacek to determine if a correlation exists between the two variables. Participants were requested to complete Sedlacek's Non-cognitive Questionnaire (NCQ) to measure the eight non-cognitive variables. The NCQ is located in appendix E.

The independent variables of the study were the eight non-cognitive variables (NCV) as identified by Sedlacek. Each independent variable was measured using questions developed by Sedlacek for his Non-cognitive Questionnaire (NCQ) in a multiple-choice format. Only one response has been predetermined to score one point for each question, indicating the presence of a non-cognitive skill. Each study participant received one point for selecting the predetermined response and zero points for selecting any other response. The predetermined response was not identifiable by the study participant. The independent variables are listed as follows with the number of questions posed for each variable and the range of scores possible for each answer:

1. Positive self-concept (3 questions, 0-3 score range)
2. Realistic self-appraisal (3 questions, 0-3 score range)

3. Understands and Knows How to Navigate the System and Racism (3 questions, 0-3 score range)
4. Preference for long-term goals over short-term needs (3 questions, 0-3 score range)
5. Availability of a strong support person (3 questions, 0-3 score range)
6. Successful leadership experience (5 questions, 0-5 score range)
7. Demonstrated community service (3 questions, 0-3 score range)
8. Knowledge acquired in or about a field (3 questions, 0-3 score range)

The study's dependent variables were the course completion rate (Pass Rate) and the cumulative GPA (GPA) of African American male students at selected community colleges. The dependent variable of Pass Rate was designated as a continuous variable ranging from 0 to 1. The Pass Rate was calculated by dividing the total hours completed by the total hours attempted (Course completion rate = Total hours completed/Total hours attempted). The dependent variable of GPA was designated as a continuous variable ranging from 0 to 4.0. The GPA was measured by dividing the total grade points by the total credit points (Cumulative GPA = Total grade points/Total credit points).

Population and Sample

African American males attending community colleges in a large urban Midwestern city is the population that was studied. The sample included African American males attending a community college. The sampling strategy included convenience sampling and purposeful sampling. Convenience sampling is a popular sampling method that collects data from those who are conveniently accessible to the researcher (Wienclaw, 2019). The researcher focused on

community colleges in the Midwest region with 10,000 or more students who agreed to allow their students to participate in the study (convenience sampling).

Sampling Procedures

African American males attending community colleges in the Midwest region of the United States were asked to complete the Non-cognitive Questionnaire. The researcher initially reached out to several colleges in Michigan, but the majority declined to participate for various reasons. Therefore, the researcher extended his search to colleges located beyond Michigan but within the Midwest region. The colleges included in this study share similar characteristics as they are all urban-serving institutions with enrollments of over 10,000 students.

The researcher sought permission to administer the study from the appropriate personnel at each community college identified to participate in this study. Once the necessary permissions from the participating college to conduct this study were granted, the institution identified the study population. Students matching the study population were sent an email inviting their participation in the study. Students who participated in the study completed an online survey and agreed to release their academic information to the researcher.

A follow-up email was sent to potential participants of the study. The follow-up email was a gentle reminder for students who wanted to participate in the study but had not yet responded to the invitation. Students who agreed to participate in the study were directed to click a link in the email to access the questionnaire. These emails were sent by the appropriate staff at the community college or the researcher based on the institution's preference.

Instrumentation

The instrument used in the study is in appendix E and is based on the NCQ created by William Sedlacek (Sedlacek, 2017). The NCQ was designed to measure students' psychological

and social qualities that impact their academic achievement (Tracey & Sedlacek, 1984a, 1989). It was chosen as the instrument in this study because of the population being studied and the characteristics being assessed about academic achievement. It was also chosen based on its successful use in similar studies conducted by the instrument's author and other researchers. In addition, it was shown to have helpful predictability of academic performance (Ting & Robinson, 1998; Tracey & Sedlacek, 1984a, 1985, 1987a).

There were several forms of the NCQ developed for use in several contexts. In addition to describing non-cognitive variables and the behaviors associated with them, Sedlacek (2017) created examples of instruments and protocols to measure non-cognitive variables. He developed non-cognitive items in Likert and multiple-choice formats. The researcher chose the multiple-choice over the Likert format because it appeared easier to complete.

Construct validity evidence was reported for the scores on the eight areas measured by the NCQ for African American and Caucasian student samples (Woods & Sedlacek, 1988; Ting & Sedlacek, 2000). Test-retest reliability estimates on NCQ scores were reported in the range of .74 to .94, with a median of .85 for different samples of the NCQ items (Tracey & Sedlacek, 1984a; Sedlacek, 2004). Significant support for the construct validity of the NCQ on the eight non-cognitive variables was based on factor analysis (Tracey & Sedlacek, 1984a).

The instrument was administered online using Google Forms, an online survey development tool. The first four items were demographic and were not used in the scoring of the NCQ. For example, the first item requested the student's college identification number to match his NCQ results with his school record (course completion rate and cumulative GPA). The other demographic items requested were the student's age and the highest level of education attained by the student's mother and father. These items were included to gather additional

socioeconomic status information on the student. Students completing the NCQ items on the survey were asked to choose the statement they agreed with most of those offered on the multiple-choice NCQ. Scoring was based on issuing a 1 when the participant selected the option reflecting the presence of the skill and a 0 for any other response.

Data Collection Procedures

The researcher selected Google Forms to collect data to reduce incomplete surveys and improve data fidelity. Google Forms is a free online tool that efficiently creates questionnaires and collects information (Vasantha Raj & Harinarayana, 2016). This tool allowed for unlimited questions and answers at no cost compared to other available survey tools that charged depending on the number of questions and recipients. The NCQ responses were collected in a cloud-based spreadsheet then it was exported into SPSS for statistical analysis.

The researcher contacted the president of the community colleges, explained the study, and requested that they identify African American male students attending their schools. The community college president referred the researcher to the director of research or the institution's Human Subjects Institutional Review Board. One of the participating community colleges requested the NCQ to send to their students directly then emailed their NCQ responses and academic information to the researcher. The remaining participating community colleges emailed a spreadsheet containing their African American male students and email addresses. The researcher emailed invitations to participate in the study and a consent form to students on the list received from the community colleges. The students identified by the participating community colleges were sent an invitation to participate in this study and requested their college release their course completion rate and cumulative GPA to the researcher. The participates of the study electronically signed and returned the consent form to the researcher.

Then, they were directed to click a link that took them to the online questionnaire. Once the students completed the questionnaire, they were given the option to enter a drawing for a $50 electronic Amazon gift card before clicking on a "Submit" button located at the end of the survey. The Google Forms interface was simple and easy to navigate.

Data was collected from April 2021 to May 2021. Participants' course completion rate and cumulative GPA were collected, with their consent, from their respective institutions. The NCQ responses were automatically compiled to a spreadsheet by Google Forms, where the researcher retrieved them to complete the data analysis.

Data Analysis

A correlation analysis was performed to determine the relationship between the dependent and independent variables. The Pearson product-moment correlation is the most common correlation measure appropriate when calculating the linear relationship between two data sets (Edwards, 1976). Therefore, a Pearson product-moment correlation was calculated to measure the strength and direction of the relationship between the independent variables NCV and the dependent variables course completion rate (Pass Rate) and cumulative GPA (GPA). In addition, a stepwise linear regression analysis was calculated to determine non-cognitive variables most predictive of course completion rate and cumulative GPA. Stepwise linear regression regresses multiple variables and removes the less important ones to identify the variables that best explain the distribution (Wang & Jain, 2003). Table 3.1 shows the statistical application by research question.

Table 3.1

Statistical applications by research question

Research Question	Statistical Application

1.	What is the relationship between non-cognitive variables identified by Sedlacek and the course completion rate (courses attempted and courses passed) of African American male community college students?	Pearson product-moment correlation analysis
2.	What is the relationship between non-cognitive variables identified by Sedlacek and the cumulative GPA of African American male community college students?	Pearson product-moment correlation analysis
	Research Question	Statistical Application
3.	Which Non-Cognitive Variables identified by Sedlacek are most predictive of course completion rate and cumulative GPA?	Stepwise linear regression analysis

Researcher Positionality

The researcher was born and raised in Detroit, Michigan, with his older and younger sisters. His father joined the Marine Corps and served in Vietnam after dropping out of high school. His mother had some college education and worked as a data entry clerk. The importance of education was stressed in their household, so the children were expected to bring home good grades.

The researcher excelled in elementary and middle school academics and was offered a full scholarship to University Liggett Upper School, a private college prep school. Additionally, he participated in many extra-curricular activities such as football, chess, debate, and jazz band. His high school prepared him well for the rigors of Kalamazoo College, where he graduated with a bachelor's degree in Economics and Business Administration.

The researcher began his career in higher education as a financial aid advisor at Western Michigan University while earning an MBA at the same institution. He discovered his passion for higher education and continued working in student services when he moved back to Detroit and was hired by Wayne County Community College District (WCCCD), his current place of employment. In 2009, he became a dean at the Northwest Campus of WCCCD. His campus

president recommended him for the John Roueche Community College Leadership Program at Kansas State University. There, he decided to study the relationship between non-cognitive variables and the academic achievement of African American males in community college.

Summary

This chapter detailed the research methods used to examine the relationship between Sedlacek's non-cognitive variables and the academic achievement of African American males in community college as indicated by course completion rate and cumulative GPA. First, the problem this study addresses, the purpose, and the research questions were restated. Then, the research design was detailed, followed by a discussion of pertinent research ethics and human subjects protection. Next, the methodology section included identifying the population and sample, sampling procedures, and the Non-cognitive Questionnaire (NCQ) used as the research instrument. Lastly, the process for collecting and analyzing the data was presented.

Chapter 4 - Findings

This chapter presents the results of the analyses performed to address three research questions. The chapter is organized into three sections

Section I – Demographic Overview of Participants

Section II – Presentation of Results

Section III – Summary.

The chapter begins with descriptive statistics to summarize the demographic characteristics of the 102 study participants and the study variables. Next, the inferential statistics are presented to show statistical analysis results for each research question. Finally, the chapter ends with a summary of the key results.

The research study examined the relationship between the eight non-cognitive factors identified by Sedlacek (2004) and the academic performance reflected by the cumulative course completion rate and cumulative GPA of African American males attending a community college. It sought to answer three research questions: 1) Is there a relationship between the eight non-cognitive variables as identified by Sedlacek (2004) and the course completion rate (course hours attempted and course hours passed) of African American male community college students? 2) Is there a relationship between the eight non-cognitive variables identified by Sedlacek (2004) and the cumulative GPA of African American male community college students? 3) Which of the eight non-cognitive variables identified by Sedlacek (2004) are most predictive of course completion rate and cumulative GPA?

The data used in this study came from two sources, the students (Non-cognitive Questionnaire (NCQ) and the institution they were attending (course completion rate and cumulative GPA). The researcher examined the data before analysis. Therefore, incomplete

surveys were not included in the analysis. The non-cognitive skills were measured by the 26 multiple choice questions on the NCQ divided into eight categories. Students received one point for selecting the predetermined response and zero points for selecting any other response. The student's institution calculated the course completion rates and cumulative GPAs and sent them electronically to the researcher.

Demographic Overview of Participants

The final sample consisted of 102 African American males attending community colleges during the 2020-2021 academic year. The participants ranged in age from 17 to 70, with an average age of 33.6. Thirty percent of the students ranged in age from 17 to 30, while the median age was 29. Table 4.1 presents the descriptive statistics for age and the study variables.

The average cumulative GPA for the sample was 2.80, ranging from 0 to 4.0. The average course pass rate was 81.7%, with a range of 0% to 100%. The means for each of the non-cognitive skills were as follows, from highest to lowest:

1. Successful Leadership experience - 2.57
2. Strong Support Person - 1.93
3. Ability to Deal with Racism - 1.93
4. Realistic Self-Appraisal - 1.55
5. Acquired Knowledge - 1.23
6. Community Service - 1.00
7. Positive Self Concept - 0.89
8. Preference for Long Term Goals - 0.82

Table 4.1

Descriptive Statistics of Participants

	N	Minimum	Maximum	Mean	Std. Deviation
AGE	102	17.00	70.00	33.6471	14.02660
GPA	102	.00	4.00	2.8006	.83744
Pass Rate	102	.00	1.00	.8171	.23408
Var 1-Positive Self Concept	102	.00	2.00	.8922	.67350
Var2-Realistic Self-Appraisal	102	.00	3.00	1.5490	.79138
Var3-Ability to Deal with Racism	102	.00	3.00	1.9314	.95710
Var4-Preference for Long Term Goals	102	.00	2.00	.8235	.68088
Var5-Has Strong Support Person	102	.00	3.00	1.9314	1.09237
Var6-Successful Leadership Experience	102	1.00	5.00	2.5686	1.01970
Var7-Community Service	102	.00	3.00	1.0000	.94398
Var8-Knowledge Acquired	102	.00	3.00	1.2255	.78232

Presentation of Results

The presentation of results is organized by research questions.

Results: Research Question

Is there a relationship between the eight non-cognitive variables identified by Sedlacek (2004) and the course completion rate (course hours attempted and course hours passed) of African American male community college students? A correlational analysis was performed between the NCQ survey results and the course completion rate (Pass Rate) of the participants to answer the first research question. The results for research question one are presented in Table 4.2. The results show that Pass Rate were significantly correlated with Variable 6--Successful Leadership Experience ($r = .230$, $p < .05$), and with Variable 4--Preference for Long Term Goals ($r = .203$, $p < .05$). Age was not a linear factor in these results.

Nonetheless, correlations were conducted within age ranges determined by a median split because of the wide age ranges. Table 4.3 presents the frequency analysis for age. The results show that 52 students aged 17 to 29, 50 students aged 30-70. The results show that among ages 17-29, Pass Rate was significantly correlated only with Variable 6--Successful Leadership Experience, but the result was somewhat stronger ($r = .342$, $p < .05$). Among those students aged 30-70, there were no significant results.

Table 4.2

Results of the Pearson Product-Moment Correlation Analyses

		AGE	GPA	PRATE	Var1	Var2	Var3	Var4	Var5	Var6	Var7	Var8
AGE	Pearson Correlation	1	.006	-.053	-.068	.167	-.267(**)	.002	.191	.166	.259(**)	-.051
	Sig. (2-tailed)	.	.954	.594	.497	.092	.007	.986	.055	.094	.008	.608
	N	102	102	102	102	102	102	1	102	102	102	102
GPA	Pearson Correlation	.006	1	.642(**)	-.154	.094	-.041	.157	-.023	.012	-.182	.016
	Sig. (2-tailed)	.954	.	.000	.122	.347	.681	.115	.821	.904	.068	.870
	N	102	102	102	102	102	102	102	102	102	102	102
PRATE	Pearson Correlation	-.053	.642(**)	1	-.110	-.098	-.122	.203(*)	.048	.230(*)	-.088	-.007
	Sig. (2-tailed)	.594	.000	.	.271	.329	.222	.041	.629	.020	.378	.947
	N	102	102	102	102	102	102	102	102	102	102	102
Var1	Pearson Correlation	-.068	-.154	-.110	1	.019	-.012	.109	.259(**)	.047	-.078	.216(*)
	Sig. (2-tailed)	.497	.122	.271	.	.847	.908	.274	.009	.640	.437	.029
	N	102	102	102	102	102	102	102	102	102	102	102
Var2	Pearson Correlation	.167	.094	-.098	.019	1	.024	.053	.136	.014	-.013	-.170
	Sig. (2-tailed)	.092	.347	.329	.847	.	.810	.597	.174	.887	.895	.088
	N	102	102	102	102	102	102	102	102	102	102	102
Var3	Pearson Correlation	-.267(**)	-.041	-.122	-.012	.024	1	.072	-.156	-.183	.066	.008
	Sig. (2-tailed)	.007	.681	.222	.908	.810	.	.470	.117	.066	.511	.939
	N	102	102	102	102	102	102	102	102	102	102	102
Var4	Pearson Correlation	.002	.157	.203(*)	.109	.053	.072	1	.183	.217(*)	.031	-.073
	Sig. (2-tailed)	.986	.115	.041	.274	.597	.470	.	.065	.028	.759	.464
	N	102	102	102	102	102	102	102	102	102	102	102
Var5	Pearson Correlation	.191	-.023	.048	.259(**)	.136	-.156	.183	1	.195(*)	.134	-.028
	Sig. (2-tailed)	.055	.821	.629	.009	.174	.117	.065	.	.049	.178	.780
	N	102	102	102	102	102	102	102	102	102	102	102
Var6	Pearson Correlation	.166	.012	.230(*)	.047	.014	-.183	.217(*)	.195(*)	1	.123	-.001
	Sig. (2-tailed)	.094	.904	.020	.640	.887	.066	.028	.049	.	.216	.992
	N	102	102	102	102	102	102	102	102	102	102	102
Var7	Pearson Correlation	.259(**)	-.182	-.088	-.078	-.013	.066	.031	.134	.123	1	-.121
		AGE	GPA	PRATE	Var1	Var2	Var3	Var4	Var5	Var6	Var7	Var8

	Sig. (2-tailed)	.008	.068	.378	.437	.895	.511	.759	.178	.216	.	.227
	N	102	102	102	102	102	102	102	102	102	102	102
Var8	Pearson Correlation	-.051	.016	-.007	.216(*)	-.170	.008	-.073	-.028	-.001	-.121	1
	Sig. (2-tailed)	.608	.870	.947	.029	.088	.939	.464	.780	.992	.227	.
	N	102	102	102	102	102	102	102	102	102	102	102

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 4.3

Frequencies for Age

	Age	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	17.00	2	2.0	2.0	2.0
	19.00	11	10.8	10.8	12.7
	20.00	12	11.8	11.8	24.5
	21.00	2	2.0	2.0	26.5
	22.00	4	3.9	3.9	30.4
	23.00	3	2.9	2.9	33.3
	24.00	3	2.9	2.9	36.3
	25.00	4	3.9	3.9	40.2
	28.00	6	5.9	5.9	46.1
	29.00	5	4.9	4.9	51.0
	30.00	3	2.9	2.9	53.9
	31.00	3	2.9	2.9	56.9
	32.00	2	2.0	2.0	58.8
	33.00	4	3.9	3.9	62.7
	34.00	1	1.0	1.0	63.7
	35.00	2	2.0	2.0	65.7
	36.00	1	1.0	1.0	66.7
	39.00	1	1.0	1.0	67.6
	40.00	1	1.0	1.0	68.6
	42.00	3	2.9	2.9	71.6
	43.00	2	2.0	2.0	73.5
	44.00	2	2.0	2.0	75.5
	47.00	2	2.0	2.0	77.5
	48.00	1	1.0	1.0	78.4
	49.00	2	2.0	2.0	80.4
	50.00	2	2.0	2.0	82.4
	51.00	2	2.0	2.0	84.3

Age	Frequency	Percent	Valid Percent	Cumulative Percent

52.00	3	2.9	2.9	87.3
53.00	1	1.0	1.0	88.2
54.00	1	1.0	1.0	89.2
55.00	1	1.0	1.0	90.2
56.00	2	2.0	2.0	92.2
58.00	1	1.0	1.0	93.1
60.00	3	2.9	2.9	96.1
61.00	1	1.0	1.0	97.1
62.00	1	1.0	1.0	98.0
64.00	1	1.0	1.0	99.0
70.00	1	1.0	1.0	100.0
Total	102	100.0	100.0	

Results: Research Question 2

Is there a relationship between the eight non-cognitive variables identified by Sedlacek (2004) and the cumulative GPA of African American male community college students? A correlational analysis was performed between the NCQ survey results and the cumulative GPAs of the participants to answer the second research question. The correlational analysis showed no significant correlations between any of the Sedlacek non-cognitive variables and cumulative GPA. However, cumulative GPA and Pass Rates were significantly correlated ($r = .642$, $p < .01$).

Results: Research Question 3

Which of the eight non-cognitive variables identified by Sedlacek (2004) are most predictive of course completion rate and cumulative GPA? A stepwise linear regression analysis was performed to answer the third research question. Table 4.4 presents the results for research question three. No additional results were found when the non-cognitive variables were entered into a linear, stepwise multiple regression equation. Variable 6--Successful Leadership Experience--was the only non-cognitive variable contributing to the prediction of Pass Rates.

The age of the students did not influence the results. However, the group was split at the median by age because of the broad age range, and the analysis was performed again within age groups. The linear regression analysis for ages 17 to 29 also showed that Pass Rates were significantly correlated only with Variable 6--Successful Leadership Experience, but the result was somewhat stronger ($r = .340$, $p < .01$, See table 4.5). For ages 30 to 70, no variables contributed significantly to the prediction of Pass Rates. For traditionally aged students 17-22, no variables contributed significantly to the prediction of Pass Rates. None of the non-cognitive variables contributed to the prediction of cumulative GPA.

While no other correlations between the eight non-cognitive variables and academic performance in terms of course completion rate and cumulative GPA were found, it is interesting to note several significant findings. The correlation matrix presented in Table 2 shows that students' age was negatively related to Variable 3--Ability to Deal with Racism ($r = -.276$, $p < .01$), indicating that the older the student, the less reported ability to handle racism. The opposite result might have been expected and suggests the complexity of racial issues. Age was also positively correlated with Variable 7-- ($r = .259$, $p < .01$), indicating that older students were more likely to report Community Service.

Table 4.4

Regression Analysis of Sedlacek Non-Cognitive Variables to Course Pass Rates (N = 102)

Entered Variables	R	R Square	F	Significance
Variable 6	.230	.053	5.576	.020

Table 4.5

Regression Analysis of Sedlacek Non-Cognitive Variables to Course Pass Rates for Ages 17-29 (N = 50)

Entered Variables	R	R Square	F	Significance
Variable 6	.342	.117	6.615	.013

Summary

This quantitative study analyzed the relationship between eight non-cognitive variables and the academic performance of 102 African American males between the ages of 17-70 attending a community college. The non-cognitive traits were measured by the Non-cognitive Questionnaire (NCQ) created by Sedlacek (2004). The academic performance was measured by the course pass rate and the cumulative GPA. A correlational analysis was performed on the non-cognitive variables and the pass rates. The results show that pass rates were significantly correlated with Variable 6--Successful Leadership Experience and Variable 4--Preference for Long Term Goals. The correlation between Variable 6--Successful Leadership Experience and the pass rates was more robust for participants aged 17-29. The correlational analysis showed no significant correlations between any of the non-cognitive variables and cumulative GPA. A stepwise linear regression analysis indicated that Variable 6--Successful Leadership Experience was the only non-cognitive variable contributing to the prediction of Pass Rates. A discussion of these findings and their implications are explored in Chapter 5.

Chapter 5 - Discussion

Chapter 5 summarizes the study and significant results drawn from the data presented in the previous chapter. It provides a discussion of the discipline-specific implications and includes implications for the profession. The chapter concludes with recommendations for practice and further research.

Summary of the Study

The purpose of this study was to examine the relationship between non-cognitive skills and academic achievement in the form of college cumulative GPA and course completion rates of African American male community college students. Eight non-cognitive variables were measured and compared to the study subjects' cumulative GPA and course completion rates.

The study investigated the following research questions: 1) Is there a relationship between the eight non-cognitive variables as identified by Sedlacek (2004) and the course completion rate (course hours attempted and course hours passed) of African American male community college students? 2) Is there a relationship between the eight non-cognitive variables identified by Sedlacek (2004) and the cumulative GPA of African American male community college students? 3) Which of the eight non-cognitive variables identified by Sedlacek (2004) are most predictive of course completion rate and cumulative GPA?

This quantitative correlational study examined the relationships between the course completion rate and cumulative GPA of African American males attending a community college during the 2020-2021 academic year to the eight non-cognitive variables (NCV) identified by Sedlacek. Each NCV was measured using questions developed by Sedlacek for his Non-cognitive Questionnaire (NCQ) in a multiple-choice format. The 102 participants completed the NCQ via a Google Form link that was emailed to them. The participating community colleges

provided the participants' course pass rate and cumulative GPA data. A correlational analysis was performed to determine the relationship between the dependent variables (the eight NCV) and the independent variables (the course pass rate and cumulative GPA). This chapter provides a discussion of key findings, implications, and recommendations resulting from this research study.

Discussion of Results

This study viewed this relationship through Sedlacek's eight Non-Cognitive Variables (NCV) framework and the Non-cognitive Questionnaire (NCQ) he developed. Successful Leadership Experience and Preference for Long Term Goals correlated with the pass rates of the study participants. The results of this study are discussed and organized by research questions and relevant literature.

Research Question 1

Is there a relationship between the eight non-cognitive variables identified by Sedlacek (2004) and the course completion rate (course hours attempted and course hours passed) of African American male community college students? A correlational analysis was performed between the NCQ survey results and the pass rates of the participants to answer this question. The results show that Pass Rate was significantly correlated with Variable 6--Successful Leadership Experience ($r = .230$, $p < .05$) and support the idea that students with successful leadership experience performing better academically. Tracey and Sedlacek (1984a, 1984b, 1985, 1987a, 1987b, 1989) and White and Shelley (1996) found leadership predictive of success in school for African American undergraduate students. They also found that leadership experience aided in the retention of Latinos and Native Americans in college.

Age was not a linear factor in these results. Still, correlations were conducted within age ranges determined by a median split because of the wide age ranges. Pass Rates were significantly correlated only with Variable 6--Successful Leadership Experience for students aged 17-29, but the result for this group was somewhat stronger ($r = .342$, $p < .05$). There were no significant results among those students aged 30-70. Pass Rates was negatively correlated with Variable 1--Positive Self Concept ($r = -.355$, $p = .05$) among traditional-aged students 17-22.

Pass Rates were also significantly correlated with Variable 4--Preference for Long Term Goals ($r = .203$, $p < .05$). Persevering toward the long-term goal of attaining academic credentials requires students to resist the urge of surrendering to short-term gratification. Consequently, students who establish long-term goals perform better in college than those who do not (Sedlacek & Sheu, 2008). This study showed that students who favored long-term goals over short-term goals had higher course pass rates. Tracey and Sedlacek (1984a, 1984b, 1985, 1987a, 1987b, 1989) showed that having long-term goals predicted grades, retention, and graduation for African American college students.

Research Question 2

Is there a relationship between the eight non-cognitive variables identified by Sedlacek (2004) and the cumulative GPA of African American male community college students? A correlational analysis was performed between the NCQ survey results and the cumulative GPAs of the participants to answer the second research question. The correlational analysis showed no significant correlations between any of the Sedlacek non-cognitive variables and cumulative GPA. However, positive self-concept, realistic self-appraisal, understanding/navigation of social systems, and community service were linked to a higher cumulative GPA for students in the

Gates Millennium Scholars program (Sedlacek & Sheu, 2004, 2008). Many programs and institutions have used non-cognitive variables to significantly enhance their ability to predict first-year college GPAs compared to the use of SAT scores alone (Sternberg, 2008b; Sternberg, Bonney, Gabora, & Merrifield, 2012).

The study results align with Thomas, Kuncel, and Crede (2007), who published a meta-analysis using the Non-cognitive Questionnaire (NCQ) in college admissions. They found that NCQ scores are primarily unrelated to college performance measured by GPA, college persistence, and credits earned. The argument presented by Thomas et al. (2007) about the initial validation study (Tracey & Sedlacek, 1984) and several subsequent studies is that "only some of the NCQ subscales predicted GPA across each semester, and none of the subscales predicted GPA for all semesters, suggesting that the associations are likely chance relationships" (p. 649). The results of the correlational analysis indicated that there was no relationship between any of the eight NCV and the cumulative GPA of the study participants, which was an unexpected result and conflicts with several previous studies

Research Question 3

Which of the eight non-cognitive variables identified by Sedlacek (2004) are most predictive of course completion rate and cumulative GPA? A stepwise linear regression analysis was performed to answer the third research question and showed that Variable 6--Successful Leadership Experience--was the only non-cognitive variable contributing to the prediction of Pass Rates. However, none of the non-cognitive variables contributed to the prediction of cumulative GPA.

Although students' age did not influence the stepwise linear regression analysis results, the participants were split at the median by age. The analysis was performed again within the

two age groups. The linear regression analysis for ages 17-29 also showed that Pass Rates were significantly correlated only with Variable 6--Successful Leadership Experience. However, the result for this age group was somewhat stronger ($r = .340$, $p < .01$, See table 5). Showing evidence of leadership experience was more predictive of pass rates for the younger participants in the study. The analysis revealed that no variables contributed significantly to the prediction of Pass Rates for participants in the 30-70 and 17-22 age groups. In addition, none of the non-cognitive variables contributed to the prediction of cumulative GPA.

While no other variables were advanced, several interesting findings were noted. Students' age was negatively related to Variable 3—Ability to Deal with Racism ($r = -.276$, $p < .01$), which indicates that older students are less adept at handling racism. The opposite result might have been expected because age insinuates experience, and experience suggests opportunities to become more proficient in the complexity of racial issues. Age was also positively correlated with Variable 7—Community Service ($r = .259$, $p < .01$), indicating that older students were more likely to report engaging in Community Service.

Implications

The results of this study generated relevant empirical implications. First, this study contributes to scholarly research and literature by filling a gap in research on the relationship between non-cognitive skills and the academic performance of African American males attending community college. Although other studies have investigated the relationship between non-cognitive skills and academic performance in higher education, most research has focused on students attending four-year institutions. The research investigating the relationship between non-cognitive skills and African Americans attending community college is limited. This may be due to various reasons, including the relatively low percentage of community college students

that this population represents and the low number of scholarly articles focused on community college students. African Americans account for 13% of all students attending community colleges in the United States (National Student Clearinghouse, 2017). Crisp, Carales, and Nunez (2016) found that "a total of 451 scholarly articles focused on community college students were published in 38 education journals between 1990 and 2014."

Secondly, the results from this study showed that successful leadership experience and pass rates were significantly correlated. Previous studies indicate that students of color who demonstrate an aptitude for leadership before entering college have a higher chance of success academically than students without leadership experience (Sedlacek, 2004; Sedlacek & Sheu, 2013). Although this study showed a strong correlation between pass rates and leadership experience ($r = .230$, $p < .05$) for all study participants, there was an even stronger correlation for students in the 17-29 age group ($r = .342$, $p < .05$). This study did not specify if the leadership experience was acquired before or after entering college; nonetheless, it indicates its importance in academic success for African American males in community college.

Furthermore, this study showed that pass rates were also significantly correlated with Variable 4--Preference for Long Term Goals ($r = .203$, $p < .05$). Pursuing a college degree is a long journey that requires persistence and discipline. This long-term goal of attaining academic credentials requires students to forgo short-term gratification. Consequently, students who establish long-term goals perform better in college than those who do not (Sedlacek & Sheu, 2008). A study of 13,555 students across eight institutions, comprised of two- and four-year colleges, revealed that students receiving coaching on succession planning and strategies to achieve long-term goals were more likely to persist in college than students not coached (Bettinger & Baker, 2014).

Finally, this research study provides relevant information to practitioners in secondary education systems and community colleges. This study suggests that leadership experience and long-term goal setting impacted the course pass rates of African American males attending a community college. Therefore, secondary schools may benefit by focusing on leadership development and long-term goal planning to prepare African American males to succeed in community college. Community colleges may also benefit by incorporating leadership development and long-term goal planning into the student support programs for African American males.

Recommendations for Practice

This study demonstrated the significance of leadership experience and long-term goal setting for African American males in community college to achieve better pass rates. As K-12 prepares students for higher education, leadership experience should be provided and encouraged. Many colleges already view leadership experience as an advantage in the admissions application process, but community colleges are open-door institutions that admit students regardless of their leadership experience. Nonetheless, community colleges can provide opportunities for their students to gain leadership experience on and off-campus.

Furthermore, K-12 and community colleges can encourage students to set long-term goals in many ways. The most obvious way to promote long-term goal setting is to incorporate it into students' educational experience. Simple lectures and workshops can provide insightful information to students and valuable examples of long-term goal setting. This may be especially useful as a component of community college orientations or bridge programs designed to prepare students for success in higher education.

Guided Pathways is an ideal framework to help students establish long-term goals. Many community colleges are creating Guided Pathways for their students. These programs are designed to engage students in setting long-term goals and working with advisors, coaches, and counselors to ensure that students stay on the path to completion. Schools participating in Achieving the Dream and the Guided Pathways Project led by the American Association of Community Colleges might increase the success of their African American male students by implementing practices based on the findings of this study.

Recommendations for Research

This study investigated the use of the eight non-cognitive variables identified by Sedlacek (2004) in predicting course completion rate and cumulative GPA of African American males in Midwestern community colleges. The results of this study contributed to the growing body of knowledge in the use of non-cognitive variables to predict academic achievement. However, future research should be conducted to improve this body of knowledge and gain better insight into the relationship between non-cognitive skills and academic performance.

First, a larger sample size is recommended. A representative population sample is used because it is impractical to survey every African American male attending a community college. A larger sample size reduces the margin of error in a study. The sample size affects the accuracy of the estimate and the study's strength to draw conclusions (Carver and Blake, 2020). Using a larger sample size will be more representative of the population of African American males attending a community college and improve the significance of the study results.

Second, the study results were collected at a single point in time from students who are at different stages of completing their educational goals. Although the study did allow the researcher to compare the participants' attitudes, students' viewpoints are dynamic. Therefore, a

longitudinal study should be conducted that investigates the course completion rate and cumulative GPA of a select cohort over a more extended period to understand better how non-cognitive variables relate to academic performance.

Finally, the study results were based on the Non-cognitive Questionnaire (NCQ) as the instrument to measure the level of non-cognitive skills in eight areas. The NCQ was created several decades ago, but other studies have found different non-cognitive skills that affect academic performance. Therefore, the researcher recommends further studies incorporating other non-cognitive variables such as grit, conscientiousness, and adjustment. The researcher also recommends reevaluating the questions used to measure non-cognitive skills in established instruments such as the NCQ to keep pace with the evolution of the community college student.

References

Adebayo, B. (2008). Cognitive and non-cognitive factors: Affecting the academic performance and retention of conditionally admitted freshmen. *Journal of College Admission*, 200, 15–21.

Allen, D. (1999). Desire to finish college: An empirical link between motivation and persistence. *Research in Higher Education, 40*(4), 461–485.

Allen, W. R. (1992). The color of success: African American college student outcomes at predominantly white and historically black public colleges and universities. *Harvard Educational Review*, *62*(1), 26-44.

Almlund, M., Duckworth, A. L., Heckman, J. J., Kautz, T. D. (2011). Personality psychology and economics (No. w16822). *NBER Working Paper Series*. Cambridge, MA: National Bureau of Economic Research.

Altman, J. H., & Sedlacek, W. E. (1991). Differences in volunteer interest by level of career orientation. *Journal of Employment Counseling*, *28*(3), 121-128.

American Association of Collegiate Registrars and Admissions Officers (AACRAO). www.aacrao.org/who-we-are

American Association of Collegiate Registrars and Admissions Officers (AACRAO). (2013, September 3). *7 principles of holistic/broad-based admissions.* http://www.aacrao.org/resources/resources-detail-view/7-principles-of-holistic-broad-based-admissions

American Association of Collegiate Registrars and Admissions Officers (AACRAO). (2014, February 24). *Should standardized testing submissions be optional?* http://www.aacrao.org/resources/resources-detail-view/should-standardized-testing-submissions-be-optional

Ames, C., and Archer, J. (1988) Achievement goals in the classroom: Student's learning strategies and motivation processes. *Journal of Educational Psychology, 80*(3), 260-267

Ancis, J. R., & Sedlacek, W. E. (1997). Predicting the academic achievement of female students using the SAT and non-cognitive variables. *College and University, 72*(3), 1-8.

Assari, S., Moazen-Zadeh, E., Caldwell, C. H., & Zimmerman, M. A. (2017). Racial Discrimination during Adolescence Predicts Mental Health Deterioration in Adulthood: Gender Differences among Blacks. *Frontiers in Public Health, 5*. https://doi.org/10.3389/fpubh.2017.00104

Bahr, P. R. (2011). A typology of students' use of the community college. *New Directions for Institutional Research*, *2011*(S1), 33-48. doi:10.1002/ir.415

Bailey, T., Badway, N., & Gumport, P. J. (2001). *For-profit higher education and community colleges.* Stanford, CA: National Center for Postsecondary Improvement.

Balenger, V. J., & Sedlacek, W. E. (1993). Black and white student differences in volunteer interests at a predominantly white university. *National Association of Student Personnel Administrators Journal, 30,* 203-208.

Balón, Daniello. (2005). Asian Pacific American college students on leadership: Culturally marginalized from the leader role? *NetResults*.

Barrett, L. (2014). What counts as (non) cognitive? A comment on Rowe and Healy. *Behavioral Ecology*. *25*(6), 1293-1294.

Bandura, A., and Schunk, D.H. (1981) Cultivating competence, self-efficacy, and intrinsic interest through proximal self-motivation. *Journal of Personality and Social Psychology, 41*, 586-598.

Barsalou, L.W. (2010) Introduction to thirtieth-anniversary perspectives on cognitive science: Past, present, and future. *Topics in Cognitive Science, 2*, 322-327.

Baumeister, R.F., Vohs, K.D., & Tice, D.M. (2007). The strength model of self-control. *Current Directions in Psychological Science, 16*, 351-355.

Beck, B. L., Koons, S. R., & Milgrim, D. L. (2000). Correlates and consequences of behavioral procrastination: The effects of academic procrastination, self-consciousness, self-esteem, and self-handicapping. *Journal of Social Behavior & Personality, 15*(5), 3-13.

Bennett, C. I. (2002). Enhancing ethnic diversity at a big ten university through project TEAM: A case study in teacher education. *Educational Researcher, 31*, 21-29.

Bernstein, D., L. Penner, A. Clarke-Sterwart and E. Roy (2007) *Psychology, 8th edition*. Belmont, CA: Wadsworth Publishing

Bettinger, E. P., & Baker, R. B. (2014). The effects of student coaching: An evaluation of a randomized experiment in student advising. *Educational Evaluation and Policy Analysis, 36*(1), 3-19. doi:http://dx.doi.org.er.lib.k-state.edu/10.3102/0162373713500523

Bonilla-Silva, E. (2001). *White supremacy & racism in the post-civil rights era*. Boulder, CO: Lynne Rienner.

Borghans, L., Duckworth, A. L., Heckman, J. J., ter Weel, B. (2008). The economics and psychology of personality traits. *Journal of Human Resources, 43*(4), 972–1059.

Boyer, S. P., & Sedlacek, W. E. (1988). Non-cognitive predictors of academic success for international students: A longitudinal study. *Journal of College Student Development, 29*, 218-222.

BPS. (2009). *First institution sector (level and control) 2003-04 by race/ethnicity (with multiple) and gender.* Washington, DC: National Center for Education Statistics, Beginning Postsecondary Students.

Bransford, J.D., Brown, A.L., and Cocking, R.R. (2000). *How people learn: Brain, mind, experience, and school*. Washington, DC: National Academy Press.

Breland, H. M. (1981). *Assessing student characteristics in admissions to higher education* (Research Monograph No. 9). New York: College Board.

Bridgeland, J., M. Bruce, and A. Hariharan. 2013. *The Missing Piece: A National Teacher Survey on How Social and Emotional Learning Can Empower Children and Transform Schools*. Collaborative for Academic, Social, and Emotional Learning

Brock, T. (2010). Young adults and higher education: barriers and breakthroughs to success. *The Future of Children, 20*(1): 109–132.

Brown, T. N., Williams, D. R., Jackson, J. S., Neighbors, H. W., Torres, M., Sellers, S. L., & Brown, K. T. (2000). "Being Black and feeling blue": The mental health consequences of racial discrimination. *Race and Society, 2*, 117–131. http://dx.doi .org/10.1016/S1090-9524(00)00010-3

Bukoski, B. E., & Hatch, D. K. (2016). "We're still here . . . we're not giving up": Black and Latino men's narratives of transition to community college. *Community College Review, 44*(2), 99–118. doi.org/10.1177/0091552115621385

Burkhardt, J. C., & Zimmerman-Oster, K. (1999). How does the richest, most widely educated nation prepare leaders for its future? *Proteus, 16*(2), 9–12.

Bush, E. C. (2004). *Dying on the vine: A look at African American student achievement in California community colleges* (Ph.D., The Claremont Graduate University). Retrieved from http://search.proquest.com/pqdtglobal/docview/305201426/abstract/DBDCFA409B0B4FCBPQ/1

Bush, E. C., & Bush, L. V. (2010). Calling out the elephant: An examination of African American male achievement in community colleges. *Journal of African American Males in Education*, *1*(1).

Calver, M. & Blake, T. (2020). Marked Cards in the Pack: Using Playing Cards to Teach the Importance of Sample Size & Testing Assumptions in Capture–Recapture Estimations of Population Size. *The American Biology Teacher, 82*(6), 396-401. https://doi.org/10.1525/abt.2020.82.6.396.

Camara, W. J., & Echternacht, G. (2000). The SAT I and high school grades: Utility in predicting success in college. *The College Board, RN-10*.

Carter, R. T. (2007). Racism and psychological and emotional injury recognizing and assessing race-based traumatic stress. *Counseling Psychologist, 35*, 13–105. http://dx.doi.org/10.1177/0011000006292033

Choy, S. (2002). Nontraditional undergraduates. National Center for Education Statistics, U.S. Department of Education. Washington, DC.

Cohen, A. M., Brawer, F. B., & Kisker, C. B. (2014). *The American community college*. Retrieved from http://public.eblib.com/choice/publicfullrecord.aspx?p=1366278

Cokley, K. (2000). An investigation of academic self-concept and its relationship to academic achievement in African American college students. *Journal of Black Psychology 26*(2), 148–164. https://doi.org/10.1177/0095798400026002002

Conard, M. A. (2006). Aptitude is not enough: How personality and behavior predict academic performance. *Journal of Research in Personality, 40*, 339–346.

Creswell, J. W. (2014). *Research design: qualitative, quantitative, and mixed methods approaches.* 4th ed. Thousand Oaks, California: SAGE Publications.

Crisp, Gloria, Vincent D Carales, and Anne-Marie Núñez. (2016). Where is the research on community college students? *Community College Journal of Research and Practice* 40.9 767–778.

Curtin, N., Stewart, A. J., & Ostrove, J. M. (2013). Fostering academic self-concept: Advisor support and sense of belonging among international and domestic graduate students.

American Educational Research Journal, *50*(1), 108–137. https://doi.org/10.3102/0002831212446662

Duckworth, A. L., Quinn, P. D., Lynam, D. R., Loeber, R., Stouthamer-Loeber, M. (2011). Role of test motivation in intelligence testing. Proceedings of the National Academy of Sciences, 108(19), 7716–7720.

Duckworth, A. L., Quirk, A., Gallop, R., Hoyle, R. H., Kelly, D. R., & Matthews, M. D. (2019). Cognitive and non-cognitive predictors of success. *Proceedings of the National Academy of Sciences*, *116*(47), 23499–23504. https://doi.org/10.1073/pnas.1910510116

Duckworth, Angela L. and Seligman, Martin E. P. (2006). Self-Discipline Gives Girls the Edge: Gender in Self-Discipline, Grades, and Achievement Scores. *Journal of Educational Psychology 98*(1): 198-208.

Dugan, J. P. (2006). Explorations Using the Social Change Model: Leadership Development among College Men and Women. *Journal of College Student Development*, *47*(2), 217–225. https://doi.org/10.1353/csd.2006.0015

Easton, J. (2013). Using measurement as leverage between developmental research and educational practice. Paper presented at the Center for Advanced Study of Teaching and Learning Meeting, Charlottesville, VA. http://ies.ed.gov/director/pdf/Easton062013.pdf

Farrington, C. A., Roderick, M., Allensworth, E., Nagaoka, J., Keyes, T. S., Johnson, D. W., Beechum, N. O. (2012). Teaching adolescents to become learners: The role of non-cognitive factors in shaping school performance. A critical literature review. Chicago, IL: University of Chicago Consortium on Chicago School Research.

Fauria, R. M., & Zellner, L. J. (2014). College students speak success. *Journal of Adult Development.* Doi:10.1007/s10804-014-9203-0

Feagin, J. (2006). *Systemic racism: A theory of oppression*. New York, NY: Routledge.

First-year persistence and retention. snapshot™ report, spring 2017. (2017). National Student Clearinghouse, 2300 Dulles Station Boulevard Suite 300, Herndon, VA 20171. http://search.proquest.com.er.lib.k-state.edu/docview/2013525014?accountid=11789

Fuertes, J. N., & Sedlacek, W. E. (1994). Predicting the academic success of Hispanic university students using SAT scores. *College Student Journal, 28,* 350-352.

Fuertes, J. N., Sedlacek, W. E., & Liu, W. M. (1994). Using the SAT and non-cognitive variables to predict the grades and retention of Asian American university students. *Measurement and Evaluation in Counseling and Development, 27,* 74-84.

Fuertes, J. N., & Sedlacek, W. E. (1995). Using non-cognitive variables to predict the grades and retention of Hispanic students. *College Student Affairs Journal, 14*(2), 30-36.

Furnham, A., Monsen, J., & Ahmetoglu, G. (2009). Typical intellectual engagement, big five personality traits, approaches to learning, and cognitive ability predictors of academic performance. *British Journal of Educational Psychology, 79,* 769–782.

Gardner, H. (2004). Frames of mind: The theory of multiple intelligences. New York, NY: Basic Books.

Greene, J. P., & Forster, G. (2003). *Public high school graduation and college readiness rates in the United States* (Education Working Paper No. 3). New York: Center for Civic Innovation at the Manhattan Institute for Policy Research.

Greene, M. L., Way, N., & Pahl, K. (2006). Trajectories of perceived adult and peer discrimination among Black, Latino, and Asian American adolescents: Patterns and psychological correlates. *Developmental Psychology, 42*, 218 –236.

Gratz v. Bollinger, 539 U.S. 306 (2003).

Grutter v. Bollinger, 539 U.S. 244 (2003).

Hamblin, J. (2015). The paradox of effort: A medical case against too much self-control. *The Atlantic.* Retrieved from http://www.theatlantic.com/health/archive/2015/07/the-health-cost-of-upward-mobility/398486/

Harris III, Wood, L. J., & Newman, C. (2015). An exploratory investigation of the effect of racial and masculine identity on focus: An examination of White, Black, Mexicano, Latino, and Asian men in community colleges. *Culture Society & Masculinities, 7*(1), 61-72. Doi:10.3149/CSM.0701.61

The Myth of Achievement Tests: The GED and the Role of Character in American Life. (2014). United Kingdom: University of Chicago Press.

Heckman, J. J., Humphries, J. E., Kautz, T. (2014). The Myth of Achievement Tests: The GED and the Role of Character in American Life. United Kingdom: University of Chicago Press.

Heckman, J. J., Kautz, T. D. (2014). Achievement tests and the role of character in American life. In Heckman, J. J., Humphries, J. E., Kautz, T. (Eds.), *The myth of achievement tests: The GED and the role of character in American life* (pp. 1–71). Chicago, IL: University of Chicago Press.

Hope, E. C., Hoggard, L. S., & Thomas, A. (2015). Emerging into adulthood in the face of racial discrimination: Physiological, psychological, and sociopolitical consequences for African American youth. *Translational Issues in Psychological Science, 1*(4), 342–351. https://doi.org/10.1037/tps0000041

Horn, L. (1996) *Nontraditional undergraduates: Trends in enrollment from 1986 to 1992 and persistence and attainment among 1989–90 beginning postsecondary students* (NCES 97-578). National Center for Education Statistics, U.S. Department of Education. Washington, DC.

Hoyt, C., Jr. (2012). The pedagogy of the meaning of racism: Reconciling a discordant discourse. *Social Work, 57*(3), 225-34. Retrieved from https://er.lib.k-state.edu/login?url=https://search-proquest-com.er.lib.k-state.edu/docview/1115591182?accountid=11789

Jackson, J. J., Connolly, J. J., Garrison, M., Levine, M., Connolly, S. L. (2015). Your friends know how long you will live: A 75-year study of peer-rated personality traits. *Psychological Science, 26*(3), 335–340.

Janssen, T., & Carton, J. S. (1999). The effects of locus of control and task difficulty on procrastination. *The Journal of Genetic Psychology, 160*(4), 436-442.

Kalsbeek, D., Sandlin, M., & Sedlacek, W. E. (2013). Employing non-cognitive variables to improve admissions and increase student diversity and retention. *Strategic Enrollment Management Quarterly, 1*(2), 132-150.

Kaufman, J. C., Agars, M. D., & Lopez-Wagner, M. C. (2008). The role of personality and motivation in predicting early college academic success in non-traditional students at a Hispanic-serving institution. *Learning and Individual Differences, 18*, 492–496.

Kim, K.A. (2002). ERIC review: Exploring the meaning of "nontraditional" at the community college. *Community College Review, 30*(1): 74–89.

Kirst, M. W., & Usdan, M. D. (2009). The historical context of the divide between K-12 and higher education. *In, States, schools and colleges: Policies to improve student readiness for college and strengthen coordination between schools and colleges* (pp. 5-22). San Jose, CA: The National Center for Public Policy and Higher Education.

Komives, S. R., Lucas, N., & McMahon, T. R. (2013). *Exploring leadership: For college students who want to make a difference* (3rd ed.). San Francisco, CA: Jossey-Bass.

Komives, S. R., Owen, J. E., Mainella, F. C., & Osteen, L. (2006). A leadership identity development model: Applications from a grounded theory. *Journal of College Student Development. 47(4),* 401-418. Doi:10.1353/csd.2006.0048.

Kuncel, N. R., & Hezlett, S. A. (2010). Fact and fiction in cognitive ability testing for admissions and hiring decisions. *Current Directions in Psychological Science, 19,* 339-345.

Lanham, B. D., Schauer, E. J., & Osho, G. S. (2011). A comprehensive analysis of the efficacy of non-cognitive measures: Predicting academic success in a historically black university in South Texas. *Journal of College Teaching & Learning, 8*(4), 43-51.

Lavin, D. E. (1965). *The prediction of academic performance*. New York: Russell Sage Foundation.

Levine, S. & Stephan, D. (2014). *Even you can learn statistics and analytics: An easy to understand guide to statistics and analytics, Third Edition* (3rd ed.). Pearson.

Edwards, A. (1976). *An introduction to linear regression and correlation* (Series of books in psychology). San Francisco. W. H. Freeman.

Lockwood, E. H, & Edwards, Allen L. (1985). An introduction to linear regression and correlation. *The Mathematical Gazette*, *69*(447), 62.

Lutz, B. F. (2005). Post Brown vs. the Board of Education: The Effects of the End of Court-Ordered Desegregation. *Federal Reserve System*, Federal Reserve System, 2005-12-19.

Mallinckrodt, B., & Sedlacek, W. E. (2009). Student retention and the use of campus facilities by race. *National Association of Student Personnel Administrators Journal, 46*(4), 566-572.

McPhail, I. P. (2003). Committed to open access. *Black Issues in Higher Education, 20*(14), 82. https://link.gale.com/apps/doc/A108265901/AONE?u=ksu&sid=bookmark-AONE&xid=6f380bca

Messick, S. (1979). Potential uses of non-cognitive measurement in education. *Journal of Educational Psychology*, *71*(3), 281.

MI School Data. (n.d.). *College Undergraduate Enrollment*. https://www.mischooldata.org/CareerAndCollegeReadiness2/IheEnrollmentByIhe.aspx

Mitchell, A. A., Sergent, M. T., & Sedlacek, W. E. (1997). Mapping the university learning environment. *National Association of Student Personnel Administrators Journal, 35*, 20-28.

Miller, Gregory & Yu, Tianyi & Chen, Edith & Brody, Gene. (2015). Self-control forecasts better psychosocial outcomes but faster epigenetic aging in low-SES youth. *Proceedings of the National Academy of Sciences of the United States of America. 112*(33), 10325-10330.

Moffitt, T. E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R. J., Harrington, H. L., Houts, R., Poulton, R., Roberts, B. W., Ross, S., Sears, M. R., Thomas, W. M., Caspi, A. (2011). A gradient of childhood self-control predicts health, wealth, and public safety. Proceedings of the National Academy of Sciences, *108*(7), 2693–2698.

Moore, S. K. (1995). *Indicators of academic success and the student characteristics of international students at Santa Monica College* (Order No. 9616492). Available from ProQuest Dissertations & Theses Global. (304277046). Retrieved from https://er.lib.k-state.edu/login?url=https://search-proquest-com.er.lib.k-state.edu/docview/304277046?accountid=11789

Naemi, B., Burrus, J., Kyllonen, P. C., & Roberts, R. D. (2012, December). *Building a case to develop non-cognitive assessment products and services targeting workforce readiness at ETS*. Princeton, NJ: Educational Testing Service.

Noble, J. P., & Sawyer, R. L. (2004). Is high school GPA better than admission test scores for predicting academic success in college? *College and University*, *79*, 17–22.

Noftle, E. E., & Robins, R. W. (2007). Personality predictors of academic outcomes: Big five correlates of GPA and SAT Scores. *Journal of Personality and Social Psychology, 93*, 116–130.

O'Brien, K. M., Sedlacek, W. E., & Kandell, J. J. (1994). Willingness to volunteer among university students. *National Association of Student Personnel Administrators Journal, 33*, 67-73.

O'Connor, M. C., & Paunonen, S. V. (2007). Big Five personality predictors of post-secondary academic performance. *Personality and Individual Differences, 43*, 971–990.

Our Documents—Brown v. Board of Education (1954). (n.d.). Retrieved October 27, 2019, from https://www.ourdocuments.gov/doc.php?flash=false&doc=87

Palmer, R. T., & Maramba, D. C. (2011). African American male achievement: Using a tenet of critical theory to explain the African American male achievement disparity. *Education and Urban Society*, *43*(4), 431–450.

Pearson, K. (1948). Early Statistical Papers. Cambridge, England: University Press.

Perlow, R., & Kopp, L. S. (2004). Conscientiousness and ability as predictors of accounting learning. *Human Performance, 17*, 359–373.

Phillips, D. C., and Harvey Siegel. 2013. "Philosophy of Education." *Stanford Encyclopedia of Philosophy*. Stanford University. http://plato.stanford.edu/archives/fall2013/entries/education-philosophy/

Polanco-Roman, L., & Miranda, R. (2013). Culturally related stress, hopelessness, and vulnerability to depressive symptoms and suicidal ideation in emerging adulthood. *Behavior Therapy, 44*, 75– 87. http://dx.doi.org/10.1016/j.beth.2012.07.002

Poropat, A. E. (2009). A meta-analysis of the five-factor model of personality and academic performance. *Psychological Bulletin, 135*, 322–338.

Radford, A.W., & Horn, L. (2012). *Web tables—An overview of classes taken and credits earned by beginning postsecondary students* (NCES 2013-151REV). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Reason, R. D. (2003). Student variables that predict retention: Recent research and new developments. *NASPA Journal, 40*(4), 172-191. doi:10.2202/1949-6605.1286

Reinhardt, B. (1996). Factors affecting coefficient alpha: A mini Monte Carlo study. In B. Thompson (Ed.), *Advances in social science methodology* (Vol. 4, pp. 3-20). Greenwich, CT: JAI.

Robbins, S.; Lauver, K.; Le, H.; et al. (2004) Do psychosocial and study skill factors predict college outcomes? A meta-analysis. *Psychological Bulletin. 130,* 261–288.

Roberts, R. D., Markham, P. M., Matthews, G., Zeidner, M. (2005). Assessing intelligence: Past, present, and future. In Wilhelm, O., Engle, R. W. (Eds.), Handbook of understanding and measuring intelligence (pp. 333–360). Thousand Oaks, CA: Sage.

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York, NY: Free Press.

Sackett, P. R., Kuncel, N. R., Arneson, J., Cooper, S. R., &Waters, S. (2009). Socio-economic status and the relationship between admissions tests and post-secondary academic performance. *Psychological Bulletin, 135,* 1–22.

Sawyer, R. (2007). Indicators of usefulness of test scores. *Applied Measurement in Education, 20,* 255–271.

Schmitt, N., Keeney, Oswald, F. L., Pleskac, T. J., Billington, A. Q., Sinha, R., et al. (2009). *Prediction of 4-year college student performance using cognitive and non-cognitive predictors and the impact on demographic status of admitted students*. Journal of Applied Psychology, *94*(6), 1479–1497.

Scholtz, Salome E. (2021). Sacrifice is a step beyond convenience: A review of convenience sampling in psychological research in Africa. *SA Journal of Industrial Psychology*, *47*(3), E1-E12.

Schultheis, L & Sedlacek, W. E. (2015, June 19). Personal communication.

Sedlacek, W. E. (1993). Employing non-cognitive variables in admissions and retention in higher education. In *Achieving diversity: Issues in the recruitment and retention of underrepresented racial/ethnic students in higher education*. (pp. 33-39). Alexandria, VA: National Association of College Admission Counselors.

Sedlacek, W. E. (1999). Black students on White campuses: 20 years of research. *Journal of College Student Development*, *40*(5), 538–550.

Sedlacek, W. E. (2003). Alternative admissions and scholarship selection measures in higher education. *Measurement and Evaluation in Counseling and Development*, *35*(4), 263-272.

Sedlacek, W. E. (2004). *Beyond the big test: Non-cognitive assessment in higher education*. San Francisco, CA: Jossey-Bass.

Sedlacek, W. E. (2005). The case for non-cognitive measures. In choosing students: Higher education admissions tools for the 21st century (pp. 177-193). *Lawrence Erlbaum Associates.*

Sedlacek, W. E. (2011). Using non-cognitive variables in assessing readiness for higher education. *Readings on Equal Education, 25,* 187-205.

Sedlacek, W. E. & Adams-Gaston, J. (1992). Predicting the academic success of student-athletes using SAT and non-cognitive variables. *Journal of Counseling and Development, 70* (6), 24-27.

Sedlacek, W., & Kalsbeck, D. (2017). *Measuring non-cognitive variables: Improving admissions, success and retention for underrepresented students*. Sterling, VA: Stylus.

Sedlacek W.E. & Sheu H.B. (2005). Early academic behaviors of Washington State Achievers. *Readings on Equal Education, 21,* 207-222.

Sedlacek, W. E. & Sheu, H. B. (2008). The academic progress of undergraduate and graduate Gates Millennium Scholars and non-scholars by race and gender. *Readings on Equal Education, 23,* 143-177.

Sellers, R. M., & Shelton, J. N. (2003). The role of racial identity in perceived racial discrimination. *Journal of Personality and Social Psychology, 84,* 1079 –1092. http://dx.doi.org/10.1037/0022-3514 .84.5.1079

Sergent, M. T., & Sedlacek, W. E. (1989). Perceptual mapping: A methodology in the assessment of environmental perceptions. *Journal of College Student Development, 30,* 319-322.

Sergent, M. T., & Sedlacek, W. E. (1990). Volunteer motivations across student organizations: A test of the person-environment fit theory. *Journal of College Student Development, 31*, 255-261.

Skomsvold, P. (2014). *Profile of undergraduate students: 2011–12* (NCES 2015-167). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Snyder, T. D., de Brey, C., & Dillow, S. A. (2019). Digest of Education Statistics 2017, 53rd Edition. NCES 2018-070. ().National Center for Education Statistics, Available from: ED Pubs. P.O. Box 1398, Jessup, MD 20794-1398. Retrieved from ERIC https://er.lib.k-state.edu/login?url=https://www-proquest-com.er.lib.k-state.edu/docview/2228650238?accountid=11789

Stankov, L., & Lee, J. (2014). Quest for the best non-cognitive predictors of academic achievement. *Educational Psychology, 34*(1). 1-8.

Stecher, B. M. & Hamilton, L. S. (2014). *Measuring hard-to-measure student competencies: A research and development plan.* Santa Monica, CA: RAND Corporation.

Sternberg, R. J. (1997). *Successful intelligence.* New York: Plume.

Sternberg, R. J. (1999). The theory of successful intelligence. *Review of General Psychology, 3*, 292 – 316.

Sternberg, R. J. (2003). Our research program validating the triarchic theory of successful intelligence: Reply to Gottfredson. *Intelligence, 31*(4), 399–413. https://doi.org/10.1016/S0160-2896(02)00143-5

Sternberg, R. J. (2008a). Using cognitive theory to reconceptualize college admissions testing. In Gluck, M. A., Anderson, J. R., Kosslyn, S. M. (Eds.), *Memory and mind: A festschrift for Gordon H. Bower* (pp. 159–175). New York, NY: Lawrence Erlbaum.

Sternberg, R. J. (2008b). Increasing academic excellence and enhancing diversity are compatible goals. *Educational Policy*, *22*(4), 487-514.

Sternberg, R. J., Bonney, C. R., Gabora, L., & Merrifield, M. (2012). WICS: A model for college and university admissions. *Educational Psychologist*, *47*(1), 30-41.

Taniguchi, H., and Kaufman, G. (2005). Degree completion among nontraditional college students. *Social Science Quarterly, 86*(4): 912–927.

The Condition of Education—Postsecondary Education—Postsecondary Institutions—Characteristics of Postsecondary Faculty—Indicator May (2019). (n.d.). https://nces.ed.gov/programs/coe/indicator_csc.asp

Thomas, L. L., Kuncel, N. R., & Credé, M. (2007). The case of the non-cognitive questionnaire: The case of the non-cognitive questionnaire. *Educational and Psychological Measurement*, *67*(4): 635-657.

Ting, S. R. (1997). Estimating academic success in the first year of college for specially admitted White students: A model of combining cognitive and psychosocial predictors. *Journal of College Student Development, 38*, 401-409.

Ting, S. R. (1998). Predicting first-year grades and retention of college students of first-generation and low-income families. *Journal of College Admissions, 158*, 14-23.

Ting, S. R. (2009). Impact of non-cognitive factors on first-year academic performance and retention of NCAA Division I student-athletes. *Journal of Humanistic Counseling, Education and Development, 48*, 215-228.

Ting, S., Grant, S. & Plenert, S. (2000). The Excellence-Commitment-and-Effective-Learning (ExCEL) Group: An integrated approach for first-year college students' success. *Journal of College Student Development, 41*(3), 353-360.

Ting, S. R. & Robinson, T. L. (1998). First-year academic success: A prediction combining cognitive and psychosocial variables for White and African American students. *Journal of College Student Development, 39*, 599-610.

Ting, S. R., & Sedlacek, W. E. (2000). *Validity of the Non-cognitive Questionnaire-Revised 2 in predicting the academic success of university freshmen* (Counseling Center Research Report #1-00). College Park, MD: University of Maryland.

Tough, P. (2013). *How children succeed: Grit, curiosity, and the hidden power of character*. New York, NY: Houghton Mifflin Harcourt.

Tracey, T. J., & Sedlacek, W. E. (1982). *Non-Cognitive Variables in Predicting Academic Success by Race*. http://eric.ed.gov/?id=ED219012

Tracey, T. J., & Sedlacek, W. E. (1984a). Non-cognitive variables in predicting academic success by race. *Measurement and Evaluation in Guidance, 16*(4), 172-178.

Tracey, T.J., & Sedlacek, W. E. (1984b). Using ridge regression with non-cognitive variables by race in admissions. *College and University, 50*, 345-350.

Tracey, T. J., & Sedlacek, W. E. (1985). The relationship of non-cognitive variables to academic success: A longitudinal comparison by race, *Journal of College Student Personnel, 26*(5), 405-410.

Tracey, T. J., & Sedlacek, W. E. (1987a). Prediction of college graduation using non-cognitive variables by race. *Measurement and Evaluation in Counseling and Development, 19*(4), 177-184.

Tracey, T., & Sedlacek, W. E. (1987b). A comparison of White and Black student academic success using non-cognitive variables: A LISREL analysis. *Research in Higher Education*, *27*(4), 333-348. https://doi.org/10.1007/BF00991662

Tracey, T. J., & Sedlacek, W. E. (1989). Factor structure of the Non-Cognitive Questionnaire-Revised across samples of Black and White college students. *Educational and Psychological Measurement, 49*(3), 637–648.

Tracey, T. J., Sedlacek, W. E., & Miars, R. D. (1983). Applying ridge regression to admissions data by race and sex. *College and University, 58*, 313-318.

Vacha-Haase, T., Henson, R. K., & Caruso, J. (2002). Reliability generalization: Moving toward improved understanding and use of score reliability. *Educational and Psychological Measurement, 62,* 562-569.

Vasantha Raju, N. & Harinarayana, N.S. (2016). Online survey tools: A case study of Google Forms. Paper presented at the National Conference on Scientific, Computational & Information Research Trends in Engineering, GSSS-IETW, Mysore.

https://www.researchgate.net/publication/326831738_Online_survey_tools_A_case_study_of_Google_Forms

U.S. Department of Education. (2009). *NPSAS: 2008 Undergraduate Students.* Washington, DC: National Center for Education Statistics.

Wang, G. C. S., & Jain, C. L. (2003). *Regression Analysis Modeling & Forecasting*. Great Neck, NY. Graceway Publishing Company.

Webb, C. T., Sedlacek, W., Cohen, D., Shields, P., Gracely, E., Hawkins, M., & Nieman, L. (1997). The impact of nonacademic variables on performance at two medical schools. *Journal of the National Medical Association*, *89*(3), 173–180.

Webster, D. W., & Sedlacek, W. E. (1982). The differential impact of a university student union on campus subgroups. *National Association of Student Personnel Administrators Journal, 19*(2), 48-51.

White, C. J., & Shelley, C. (1996). Telling stories: Students and administrators talk about retention. *New Directions for Student Services*, *1996*(74), 15–34. https://doi.org/10.1002/ss.37119967404

White, T. J., & Sedlacek, W. E. (1986). Non-cognitive predictors: Grades and retention of specially admitted students. *Journal of College Admissions, 3*, 20-23.

Wienclaw, R.A. (2019). *Salem press encyclopedia*. Retrieved from https://eds-a-ebscohost-com.nwulib.nwu.ac.za/eds/detail/detail?vid=1&sid=614866f5-65a9-420e-ae7d-8e493c8583d6%40sdc-v-sessmgr01&bdata=JnNpdGU9ZWRzLWxpdmU%3d#AN=89185687&db=ers

Wilkes, R., & Iceland, J. (2004). Hypersegregation in the twenty-first century. *Demography, 41,* 23–36. http://dx.doi.org/10.1353/dem.2004.0009

Williams, D. R., Neighbors, H. W., & Jackson, J. S. (2003). Racial/ethnic discrimination and health: Findings from community studies. American Journal of Public Health, 93, 200 – 208. http://dx.doi .org/10.2105/AJPH.93.2.200

Wood, J. L. (2013). The Same... But Different: Examining Background Characteristics among Black Males in Public Two-Year Colleges. *The Journal of Negro Education; Washington*, *82*(1), 47–61.

Wood, J. L., Harris III, F., & Xiong, S. (2014). Advancing the success of men of color in the community college: Special issue on the Community College Survey of Men. *Journal of Progressive Policy & Practice, 2*(2), 129-133

Wood, J. L., Hilton, A. A., & Hick, T. (2014). Motivational factors for academic success; Perspectives of African American males in the community college. *The National Journal of Urban Education and Practice, 7*(3), 247-265.

Wood, J. L., & Palmer, R. T. (2013a). The likelihood of transfer for Black males in community colleges: Examining the effects of engagement using multi-level, multinomial modeling. *The Journal of Negro Education, 82*(3), 272-287. doi:10.7709/jnegroeducation.82.3.0272

Wood, J. L., & Palmer, R. T. (2013b). Understanding the personal goals of Black male community college students: Facilitating academic and psychological development. *The Journal of African American Studies, 17*(2), 222-241. doi:10.1007/s12111-013-9248-3

Wood, J. L., Palmer, Palmer, R. T., & Harris III, F. (2015). Men of color in community colleges: A synthesis of empirical findings. *Higher Education: Handbook of Theory and Research, 30*, 431-468. doi:10.1007/978-3-319-12835-1_10

Woods, P. A., & Sedlacek, W. E. (1988). *Construct and congruent validity of the non-cognitive questionnaire (NCQ).* (Counseling Center Research Report # 6-88). College Park, MD: University of Maryland.

Yeager, D. S., Walton, G. M. (2011). Social-psychological interventions in education: They're not magic. *Review of Educational Research, 81*(2), 267–301.

Zimmerman, B.J. (1990) Self-regulated learning and academic achievement: An overview. *Educational Psychologist, 25*(1), 3-17.

Appendix A - Introduction Letter/Informed Consent

Dear Student,

I am inviting you to participate in a research study on the academic achievement of African American men. My name is Karow Gordon and I am a doctorate student completing my research study in the Community College Leadership Program at Kansas State University in Manhattan, KS. The purpose of the research is to determine the relationship between non-cognitive skills and the academic achievement of African American males in community colleges.

All participants who complete the survey will be eligible to enter a DRAWING for one of FIVE $50 GIFT CARDS.

Your participation in this research project is entirely voluntary. You may decline altogether or stop participating at any time. Your academic information will not be shared and will remain confidential. There are no penalties for participating or refusing to participate in the study. Your responses will remain confidential and anonymous.

I hope you will agree to participate because your experience will be very valuable in helping us to support the achievement of African American males in community colleges. I am an African American male working as an administrator in a community college in Michigan.

By agreeing to participate in this study, you agree to complete the Non-cognitive Questionnaire (NCQ) and to release your course completion and cumulative GPA rate from the community college you are currently attending to me.

If you agree to participate in this project, please indicate below that you authorize your institution to release your course completion rate and cumulative GPA to be used in completing this study.

___ I have read and understand the above and I choose to participate in this study by releasing my course completion rate and cumulative GPA and completing the study questionnaire.

___ I choose not to participate in this study.

Please return this form to the: (email address of college staff)

Thank you for your help with this important endeavor.

Sincerely,

Karow Gordon
Doctoral Student
Kansas State University
rowlum@ksu.edu

Appendix B - Questionnaire Cover Letter

Dear Student,

I am inviting you to participate in a research study on the academic achievement of African American men. My name is Karow Gordon and I am a doctorate student completing my research study in the Community College Leadership Program at Kansas State University in Manhattan, KS. The purpose of the research is to determine the relationship between non-cognitive skills and the academic achievement of African American males in community colleges.

By agreeing to participate in this study, you agree to complete the Non-cognitive Questionnaire (NCQ) and authorize access by the researcher to your cumulative GPA and course completion rate from the community college you are currently attending. Your academic information will not be shared and will remain confidential.

I hope you will agree to participate because your experience will be very valuable in helping us to support the achievement of African American males in community colleges. I am an African American male working as an administrator in a community college in Michigan.
All participants who complete the survey will be eligible to enter a DRAWING for one of FIVE $50 GIFT CARDS.

This link below will take you to a survey. To complete the questionnaire, hold the Ctrl key and click on the link or copy and paste the link to your browser.
https://docs.google.com/forms/d/1O_EFVQ1b7XtxzjoFE_85oAmFHaKW01WT0m52GZ81Ql8/edit?usp=sharing

Your participation in this research project is entirely voluntary. You may decline altogether or stop participating at any time. There are no penalties for participating or refusing to participate in the study. Your responses will remain confidential and anonymous. Data from this research will be kept under lock and key and reported only as a collective combined total. No one other than the researcher will know your answers to this questionnaire.

If you agree to participate in this project, please answer the questions on the questionnaire as best you can. It should take approximately 15 minutes to complete. Please return the questionnaire as soon as possible by clicking on the "Submit" button after you complete the survey.

Thank you for your help with this important endeavor.

Sincerely,

Karow Gordon
Doctoral Student
Kansas State University
rowlum@ksu.edu

If you have any questions about this project, feel free to contact Karow Gordon at rowlum@ksu.edu. Information on the rights of human subjects in research is available through the KSU's Institutional Review Board at Kansas State University 107 Calvin Hall Ste 110, Manhattan, KS 66506; website: https://www.k-state.edu/comply/irb/aop-assurances/IRB-SOP.pdf.

Appendix C - Follow-up Introduction/Consent Form

Dear Student,

My name is Karow Gordon and I am a doctoral student in the Community College Leadership Program at the Kansas State University. Recently, you were sent a request to participate in a brief survey that is investigating the factors that best predict the academic success of African American male community college students.

Knowing how busy you are, I thought I would send another brief request for your participation as I cannot determine who has and who has not responded. You are eligible to participate if you are an African American male attending a community college. Your participation is completely confidential. If you have already agreed to participate, thank you.

All participants who complete the survey will be eligible to enter a DRAWING for one of FIVE $50 GIFT CARDS.

Your participation in this research project is entirely voluntary. You may decline altogether or stop participating at any time. Your academic information will not be shared and will remain confidential. There are no penalties for participating or refusing to participate in the study. Your responses will remain confidential and anonymous.

I hope you will agree to participate because your experience will be very valuable in helping us to support the achievement of African American males in community colleges. I am an African American male working as an administrator in a community college in Michigan.

By agreeing to participate in this study, you agree to complete the Non-cognitive Questionnaire (NCQ) and to release your course completion and cumulative GPA rate from the community college you are currently attending to me.

If you have not responded and would like to participate in this study, please indicate below that you authorize your institution to release your course completion rate and cumulative GPA to be used in completing this study.

___ I have read and understand the above and I choose to participate in this study by releasing my course completion rate and cumulative GPA and completing the study questionnaire.

___ I choose not to participate in this study.

Please return this form to the: (email address of college staff)

Thank you for your help with this important endeavor.

Sincerely,

Karow Gordon
Doctoral Student
Kansas State University
rowlum@ksu.edu

Appendix D - Follow-up Questionnaire Request Letter

Dear Student,

My name is Karow Gordon and I am a doctoral student in the Community College Leadership Program at the Kansas State University. Recently, you were sent a request to participate in a brief survey that is investigating the factors that best predict the academic success of African American male community college students.

Knowing how busy you are, I thought I would send another brief request for your participation as I cannot determine who has and who has not completed the questionnaire. You are eligible to participate if you are an African American male attending a community college. Your participation is completely confidential. If you have already agreed to participate, thank you.

By agreeing to participate in this study, you agree to complete the Non-cognitive Questionnaire (NCQ) and authorize access by the researcher to your cumulative GPA and course completion rate from the community college you are currently attending. Your academic information will not be shared and will remain confidential.

I hope you will agree to participate because your experience will be very valuable in helping us to support the achievement of African American males in community colleges. I am an African American male working as an administrator in a community college in Michigan.
All participants who complete the survey will be eligible to enter a DRAWING for one of FIVE $50 GIFT CARDS.

This link below will take you to a survey. To complete the questionnaire, hold the Ctrl key and click on the link or copy and paste the link to your browser.
https://docs.google.com/forms/d/1O_EFVQ1b7XtxzjoFE_85oAmFHaKW01WT0m52GZ81Ql8/edit?usp=sharing

Your participation in this research project is entirely voluntary. You may decline altogether or stop participating at any time. There are no penalties for participating or refusing to participate in the study. Your responses will remain confidential and anonymous. Data from this research will be kept under lock and key and reported only as a collective combined total. No one other than the researcher will know your answers to this questionnaire.

If you agree to participate in this project, please answer the questions on the questionnaire as best you can. It should take approximately 15 minutes to complete. Please return the questionnaire as soon as possible by clicking on the "Submit" button after you complete the survey.

Thank you for your help with this important endeavor.

Sincerely,

Karow Gordon
Doctoral Student

Kansas State University
rowlum@ksu.edu

If you have any questions about this project, feel free to contact Karow Gordon at rowlum@ksu.edu. Information on the rights of human subjects in research is available through the KSU's Institutional Review Board at Kansas State University 107 Calvin Hall Ste 110, Manhattan, KS 66506; website: https://www.k-state.edu/comply/irb/aop-assurances/IRB-SOP.pdf.

Appendix E - Demographic/Non-cognitive Questionnaire (NCQ)

Participation in this study is voluntary. Participants can abort the questionnaire at any time during the survey. Participants' identities will remain confidential and private.

You are being asked to complete a brief questionnaire, which is mostly about your thoughts and feelings. There are no right or wrong answers, so try to answer as honestly as you can. It is also essential that you do not skip items; please attempt all of them. All information you provide will be kept confidential.

Please enter your student college identification number

_____

Please enter your age

_____

Highest education level attained by your mother

- ❑ High school graduate, diploma, or the equivalent (for example: GED)
- ❑ Some college credit, no degree
- ❑ Trade/technical/vocational training
- ❑ Associate degree
- ❑ Bachelor's degree
- ❑ Master's degree
- ❑ Professional degree
- ❑ Doctorate degree

Highest education level attained by your father

- ❑ High school graduate, diploma, or the equivalent (for example: GED)
- ❑ Some college credit, no degree

- ❑ Trade/technical/vocational training
- ❑ Associate degree
- ❑ Bachelor's degree
- ❑ Master's degree
- ❑ Professional degree
- ❑ Doctorate degree

Multiple-Choice Items

Variable 1: Positive Self-Concept

You are about to do something you have never done before. Which best describes how you feel before you begin?

1. Worried something will probably go wrong
2. Unprepared
3. Not sure of how it will come out
4. Confident that I can do it

When you believe something strongly, which best describes you?

1. I will probably change my mind in the future.
2. I may change with new information.
3. I am open to change, but I am unlikely to do so.
4. I am not sure

Which of the following jobs would most appeal to you? Choose one.

1. One where I could be close to my family
2. One that paid a lot
3. One where I could use what I learned in school
4. One that was different from what I was used to
5. One that involved working with people

Variable 2: Realistic Self-Appraisal

You feel one of your teachers has given you a lower grade than you deserve. What would you most likely do?

1. Report the teacher to his or her supervisor
2. Say nothing but try to prove the teacher wrong next time
3. Talk to the teacher and make your case
4. Complain to friends but do nothing
5. Leave the teacher a note, complaining

Which option best describes you?

1. I know what I do best.
2. I am surprised at the way some people think of me.
3. I spend time figuring out what I should do.
4. A test can't tell me what I know.
5. I am like most people.

What do you do best?

1. I am not sure.
2. No one knows until they try something.
3. I stick to what I know.
4. I do some things well and others less well
5. I do most things well

Variable 3: Understands and Knows How to Navigate the System and Racism

Which of these statements do you most agree with?

1. Discrimination is in the eye of the beholder.
2. I have never been discriminated against.
3. The system is fairer for some people than others.
4. Racism is not a big problem in society.
5. Anyone can achieve if he or she works hard.

Which of these statements do you most agree with?

1. Women who complain about sexism have a problem.
2. I have never been racist in my actions.
3. I don't know why people cry "racism" over simple issues.
4. Some have a more difficult time because of their race.
5. People who see racism everywhere should get over it.

Which of these statements do you most agree with?

1. Few people are racists.
2. Life is fair for most people.
3. If you do not succeed, it is your fault.
4. I have overcome obstacles based on who I am.
5. I can't help the way people treat me.

Variable 4: Prefers Long-Range Goals to Short-Term or Immediate Needs

Which of these statements do you most agree with?

1. Planning is not a good idea because things always change.
2. People are always getting in the way of my plans.
3. I do not have a clear plan for my future.
4. I know what I will be doing next year.

5. I like to be flexible in planning.

Which of these statements do you most agree with?

1. I like to take things as they come.
2. If you plan too far ahead, things might not work out.
3. I like to start each day without knowing exactly what will happen.
4. I like to make sure I finish today's goals before I worry about tomorrow's.
5. Over-planning makes for a dull life.

Which of these statements do you most agree with?

1. Planning is not fun.
2. I do not like to plan each day beforehand.
3. If I do not plan, things don't work out.
4. My friends plan more than I do.
5. I have the most fun when I do not plan ahead.

Variable 5: Availability of Strong Support Person

Which of these statements do you most agree with?

1. It is best to keep your problems to yourself.
2. I don't have problems I need help with.
3. Usually, the advice you get from others is not good.
4. I don't like to listen to others on handling my issues.
5. I have someone I talk to about my problems.

Which of these statements do you most agree with?

1. Everyone needs help sometimes.
2. Most people are too involved with their issues to give good advice.
3. I am not sure where I would go to solve a personal problem.
4. I am good at figuring things out for myself.
5. No one in my family can give me good advice on personal issues.

Which of these statements do you most agree with?

1. When I have a problem in my life, I like to handle it myself.
2. I have someone in my life that I had turned to when I needed advice.
3. I do not have a teacher who has given me good advice.
4. No one in my family can give me good advice on academic issues.
5. Sometimes it is best to handle your problems.

Variable 6: Successful Leadership Experience

You have been given a group project in a class. What would you probably do?

1. Work on my part alone until it was finished
2. Get the group together where we each are in charge of part of it
3. Take charge and decide what each person is to do

4. Get the group together and get someone else to take the lead
5. Not sure

Imagine that your family is dealing with a difficult problem. What kind of role might you play?

1. The leader; you can come up with ideas
2. An active member; you might be able to add something helpful
3. Someone who does what the leader suggests
4. Someone who tries to stay out of the discussion
5. Not sure

A friend comes to you with a problem concerning a relationship he or she has and wants your advice. Which best describes your reaction?

1. Think about it for an extended period and then offer advice
2. Ask someone else what he or she thinks
3. Immediately offer advice
4. Think about it briefly and then offer advice without consulting anyone
5. Not get involved

Imagine the disagreements you regularly get into with someone in your life. What usually is the result?

1. You persuade him or her to see things your way.
2. The person persuades you to see things his or her way.
3. You fight, and each person sticks to his or her viewpoint.
4. You never have disagreements.
5. I'm not sure.

Two friends come to you for advice, individually, on how to resolve an issue between them. What would you do?

1. Avoid advising because you do not want to hurt either one
2. Try to bring them together to work things out
3. Choose one friend's logic and try to get the other to agree
4. Decide what to do for them
5. Not sure

Variable 7: Demonstrated Community Service

Which of these options best describes your feeling about work? Choose one.

1. It should satisfy me
2. It should help others
3. It should pay a lot
4. It should pay enough to meet my needs
5. It should teach me something

You are running late for an important meeting and see someone by the side of the road trying unsuccessfully to change a tire. What would be your most likely reaction?

1. Feel sorry for the person and hope he or she can change the tire
2. Stop and help
3. Assume he or she has called for assistance
4. Feel guilty but do not stop
5. Go on to your meeting; it's not your problem

Which of these options best describes your perspective?

1. I work best alone.
2. Working in a group is usually a waste of time.
3. Problems are best solved in groups.
4. Individual effort gets the job done.
5. Most people prefer their way of doing things.

Variable 8: Knowledge Acquired in or About a Field (Nontraditional Learning)

Which option do you most agree with?

1. I learn best in a class
2. I learn best from outside reading
3. I learn best when I have fun
4. I learn best from a job
5. There are lots of ways to learn

Which option do you most agree with?

1. I have learned more outside of school than in school
2. I am not creative
3. I do not enjoy puzzling over something
4. Most problems take care of themselves over time
5. It is best to solve one problem at a time

Which of these statements do you most agree with?

1. What you learn in life doesn't help much in school
2. I learn best from figuring things out on my own
3. Sometimes you can over analyze something
4. I am not sure how I learn best
5. It is better to have one solution to a problem than to have many

Appendix F - Request to Use NCQ Instrument

I am a doctoral student at Kansas State University (KSU) completing a dissertation in the Community College Leadership Program. I am writing to ask for written permission to use the multiple-choice version of the Non-cognitive Questionnaire (NCQ) in my research study. My research is studying the relationship between non-cognitive skills and the academic achievement of African American males in community colleges. My research is being supervised by my professor, Dr. Irving Pressley McPhail, president of St. Augustine University.

I plan to recreate the NCQ in Google Forms, where it will be distributed electronically to African American males attending community colleges in Michigan. The study participants will return the completed questionnaire to my Google account for compilation and analysis. A correlation analysis will be performed to determine the relationship between the dependent and independent variables. A multiple regression analysis will be conducted to determine the effectiveness of the NCQ subscales in predicting the academic success of African American males as measured by the rate of completion and the cumulative GPA. A bivariate correlation analysis will be conducted to investigate the relationship between the independent variables. Next, a hierarchical multiple regression will be performed to ascertain whether the non-cognitive characteristics can predict the course completion rate and the cumulative GPA of the students in the study.

In addition to using the instrument, I also ask your permission to reproduce it in my dissertation appendix. The dissertation will be published in the KSU Institutional Repository at https://krex.k-state.edu/dspace/handle/2097/4 and deposited in the ProQuest Dissertations & Theses Global database.

I want to use [and reproduce] your NCQ under the following conditions:

- I will use the NCQ only for my research study and will not sell or use it for any other purposes
- I will include a statement of attribution. If you have a specific statement of attribution that you would like for me to include, please provide it in your response.
- At your request, I will send a copy of my completed research study to you upon completion of the study and provide a hyperlink to the final manuscript.

If these are acceptable terms and conditions, please indicate so by replying to me through e-mail at rowlum@ksu.edu,

Sincerely,

Karow Gordon

This permission letter has been adapted with permission from:

- Appendix E of the Senior Thesis Handbook (2009-2010), Psychology Department, Dominican University of California Simon, M. K. (2011).

Dissertation and scholarly research: Recipes for success (2011 Ed.). Seattle, WA, Dissertation Success, LLC. http://dissertationrecipes.com/wp-content/uploads/2011/04/Permissions.pdf

Appendix G - Permission to Use NCQ

Re: Request to Use NCQ
William E. Sedlacek
Sat 8/1/2020 1:19 PM
To: Karow Gordon

Karow- You have my permission to use the NCQ in your research-I ask that you reference the source- see my website below for my vita with many references on the NCQ- the 2017 book contains many. Please send a copy when you finish & good luck- Bill

William E. Sedlacek
Professor Emeritus
College of Education
University of Maryland
P.O. Box 539
Great Cacapon, WV 25422-0539
Website http://williamsedlacek.info
Thought for today http://www.williamsedlacek.info/SedCal/
Latest book "Measuring Non-cognitive Variables: Improving Admissions, Success, and Retention for Underrepresented Students"
https://sty.presswarehouse.com/Books/BookDetail.aspx?productID=412450